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Journal

THE ANNUAL RECEPTION

The first post-war annual reception of the Royal Institute is to be held on Friday, 28 June, from 8 p.m. to 11 p.m. The reception is an excellent opportunity for members to entertain guests and to show them the Institute when a distinguished gathering of official guests is present. The President and Lady Thomas will receive guests in the Henry Florence Hall. Details of arrangements will be announced later in the technical press. Tickets will be 7s. 6d. each and members can bring not more than one guest. Uniforms or lounge suits will be worn. Members are advised to apply for tickets early.

"BUILDING NOW" ON TOUR

The R.I.B.A. *Building Now* Exhibition has so far been booked for its provincial tour as follows:—BIRMINGHAM, *18 June to 25 June*—Galleries of the Royal Birmingham Society of Artists. Arrangements made by the Birmingham and Five Counties Architectural Association. HULL, *July*—Mortimer Museum, Carr Lane, Hull. Arrangements made by the Museum Director. NEWCASTLE-UPON-TYNE, *August*—Laing Art Gallery and Museum. Arrangements made by the Northern Architectural Association. LEEDS, *September*—Lewis' Stores, Leeds. Arrangements made through the *Yorkshire Evening News*. MANCHESTER, *October*—Central Library, Manchester. Arrangements made by the Manchester Society of Architects. Arrangements are at present in progress for further showings at Coventry, Liverpool, Cardiff and Guildford.

LECTURE ON OFFICE ORGANISATION

The first of the series of informal discussion lectures on office organisation was a great success. It had originally been arranged for the buffet to be in the Aston Webb Room and the meeting in the Members' Room. But so many turned up to the meeting that it had to be transferred to the Henry Jarvis Hall. The three principal speakers all stimulated brisk discussions. At the close, a vote taken on the value of continuing the series gave a unanimous decision in favour. A report of the meeting will be published in the June number of the JOURNAL.

FEES FOR SCHEDULES OF DILAPIDATIONS FOLLOWING DE-REQUISITIONING

In the issue of the JOURNAL for October 1945 reference was made to a meeting of representatives of the Practice Committee and officials of the Board of Inland Revenue regarding fees for part-time employment in the preparation of Schedules of Dilapidations following De-requisitioning. The Board were proposing to pay for part-time employment at the same rate *pro rata*, as they pay for full-time employment, which would amount to approximately £2 per day.

After further consideration the Board of Inland Revenue have agreed to pay up to 5 guineas per day for the Principal class of Architect, up to 3½ guineas per day for the Senior Assistant class, and 2½ guineas per day for the Junior Assistant class.

Having regard to the fact that this work is to be undertaken as a part-time engagement, there would appear to be no objection to members accepting the work at the revised rates of remuneration, and the Council, on the recommendation of the Practice Committee, have authorised this notification to members accordingly.

DESIGN OF BUILDINGS OF NATIONAL IMPORTANCE

Mr. Alfred Bossom, M.P., on 8 April raised a matter of some importance to the architectural profession when he asked the Minister of Works in the House of Commons "Whether it will be the policy of the Government, when important national buildings are to be erected, that the architectural work for these shall be done by permanent officials of his department or the Ministry of Health; or whether it will be open to selection of an independent architect by competition or some other suitable method."

The Minister replied: "No change is contemplated in the policy followed before the war by the Office of Works in respect of important national buildings, which was to engage nominated architects of high merit for such works. It is the intention in future to meet fluctuating demands for Government buildings, so far as possible, by employing architects in private practice to a large extent, instead of, as hitherto, meeting fluctuating demand by taking on and discharging unestablished professional staff."

Although the first part of the Minister's reply is slightly open to question and though he avoided Mr. Bossom's specific suggestion of selection by competition, it can be regarded as marking a forward step in the abandonment of the bad practice of swelling staffs with temporary assistants. Members who served on such staffs, specially in the early days of the war, know only too well the inefficiency which results from it.

FORTHCOMING EXHIBITIONS

The Knutsford Exhibition, organised by the *News Chronicle*, will be on view at the Royal Institute, in the Foyer of the Henry Jarvis Hall, from 2 p.m. on Tuesday 4 June until the end of the first week in July. As we go to press, details of the opening ceremony, at 12 noon, are not settled. London members should take the opportunity of visiting an exhibition which not only illustrates a planning

Block of six houses, Blackwood Avenue, Speke

scheme, showing many advanced ideas, but one which is a model (although a relatively costly one) of how town planning should be " put across " to the general public.

An exhibition of work of the students of the Polytechnic School of Architecture is also to be opened on Tuesday, 4 June, at 3 p.m., and will be in the Henry Florence Hall. This exhibition, which will remain open until 14 June, will comprise a representative selection of drawings taken from work produced by the students during the last few years, some of the work being executed under the stress of flying-bomb attacks and aerial bombardment. The school has been, in fact, the only London school of architecture which was not evacuated and which remained open throughout the war years.

An exhibition of Architects' Working Drawings will be on view in the Henry Florence Hall from Thursday, 20 June, until Thursday, 27 June inclusive. An Informal Students' Evening will be held on Tuesday, 25 June, at 6.30 p.m., when Sir Thomas Bennett [*F.*], Mr. Graham R. Dawbarn [*F.*], Mr. J. Murray Easton [*V.-P.*] and Mr. Howard Robertson [*F.*], or their representatives, will attend to explain points of special interest in their drawings on view.

Arrangements are being made for the holding of an exhibition of Swiss contemporary architecture at the Royal Institute in the autumn. This promises to be of outstanding interest to architects. Swiss architecture, always of notably high quality, has continued to develop since 1939, when this country ceased creating architecture in view of more pressing commitments.

Practice Committee. Tenders and Quantities

The Practice Committee wish to draw the attention of members to two matters which were referred to them for consideration by the Liaison Committee, London Architects and Builders:

Provision of Adequate Time for the Preparation of Tenders. Some firms of builders have recently instanced cases of contracts amounting to several thousands of pounds, in which only a short time had been allotted for the preparation of the respective tenders. It was pointed out that the necessity of obtaining quotations from firms of sub-contractors before sending in his tender had rendered it impossible for the builder concerned to comply in the specified time, as delays were unavoidable owing to the shortage of staff in the offices of both builders and sub-contractors. In view of the prevailing conditions the Practice Committee suggest that at least double the time should be allowed for the preparation of tenders than was allowed prior to the war.

Bills of Quantities: Insertion of Onerous Clauses. Examples have also been submitted of the insertion of onerous clauses in bills of quantities, tendering conditions, and specifications, which were contrary to the terms of the contract itself. In drawing the attention of members to this procedure, the Committee suggest that it is desirable that steps should be taken to eliminate clauses of this character, which put an unfair burden on the contractor.

B.I.N.C. Congress Report

The Building Industries National Council announces the publication of a comprehensive record of the proceedings at the Second Building Congress. For the sake of economy nearly all the introductory and complimentary speeches and matter of merely transitory interest have been deleted, but those parts of the speeches which have permanent value have been given in full. Obtainable from the Building Industries National Council, 11 Weymouth Street, W.1, price 4s. 6d.

Special Lecture on Algerian Town Planning

Monsieur Tony Socard, Director of Town and Country Planning in Algeria, is writing a paper which will be translated into English and read at a special lecture meeting at the R.I.B.A. on Thursday, 30 May, at 6 p.m. The paper is entitled *Town Planning in Algeria.*

C. H. James, R.A.

Members will wish to join us in congratulating Mr. Charles Holloway James [*F.*] on his election as Royal Academician.

R.I.B.A. Diary

Thurs., 30 May, 6 p.m. Special Lecture on
Town Planning in Algeria.
Mons. Tony Socard.

Tues., 4 June, 12 noon. Opening Ceremony of
The Knutsford Exhibition.

Tues., 4 June, 3 p.m. Opening Ceremony of
Work of Students of the Polytechnic School of Architecture.

Wed., 5 June, 5.45 p.m. Architectural Science Board Lecture.
Sociology in Architecture.
Papers by A.S.B. Study Group No. 1.
Presented by *M. Hartland Thomas* [*F.*].

Tues., 25 June, 6 p.m. Informal General Meeting.
The Place of the Architect in the Post-War World.
By *Gerald Barry* [*Hon. A.*].
Announcement of Council Election Results.

Thurs., 20 June to Thurs. 27 June. Exhibition of
Architects' Working Drawings.

Tues., 25 June, 6.30 p.m.
Informal Students' Evening.

Fri., 28 June. Annual Reception.

Fri., 12 July, 6 p.m. Special Lecture.
A World City for the United Nations.
By *Lewis Mumford.*

Gerneth Road, Speke.

POST-WAR HOUSING

L. H. KEAY, O.B.E., M.Arch. [*V.-P.*]

A PAPER READ AT AN INFORMAL MEETING ON TUESDAY, 9 APRIL, 1946.
THE PRESIDENT IN THE CHAIR

A little more than ten years ago I had the honour of being invited to read a paper on "Housing" before the members of this Royal Institute. Recalling that occasion I remember that my paper was delivered under the Chairmanship of Mr. Percy Thomas who has since been honoured by the King and now appears again to-day to the intense satisfaction of every member of this Institute as "Sir Percy." During that meeting I was described as "youthful and vigorous." Whilst all vestige of youth has long since disappeared I still maintain a little vigour. A few months earlier the Royal Assent had been given to the Housing Act of 1935, which gave to local authorities powers for the redevelopment of their older residential districts. It was possibly not surprising that I asked permission to extend the scope of my paper to include not only "Housing" but also "The Redevelopment of Central Areas."

I trust that I may retain some measure of the vigour which was attributed to me at the meeting more than ten years ago and thus be enabled to devote many years yet to that phase of architectural work which has been my main concern for nearly a quarter of a century. To-day I trust that in speaking to you upon "Post-War Housing" you will allow me to cover the much wider field which the term "Housing" now implies.

Before going on to refer to the extent and nature of the problem which faces us to-day and of making any suggestions towards its solution, I should like to gather up some of the threads where I dropped them ten years ago. In 1935 Parliament had recognised that the development of virgin land remote from the centres of our large towns provided no satisfactory solution for slum clearance or the abatement of overcrowding. It was surprising that so few local authorities availed themselves of the powers for the redevelopment of their older residential districts. The reluctance to embark upon schemes of practical town planning was difficult to understand. Despite this the need for large-scale replanning and redevelopment was fully recognised in 1935. To-day not only does the need remain but the opportunity is present, and we are faced with a task, the magnitude of which, although not fully comprehended ten years ago, is, I think, fully appreciated to-day by all who bear any responsibility for the future housing of our people.

We are passing through a period of transition which will last until we can completely turn our back upon the conditions forced upon us by "total war" to the more normal conditions in which the building industry will be free to build to our plans

Greyhound Farm Road, Speke.

without hindrance of controls or shortages. In this transitional period we may be compelled to adopt building methods and to accept standards which may cause some uneasiness and even anxiety.

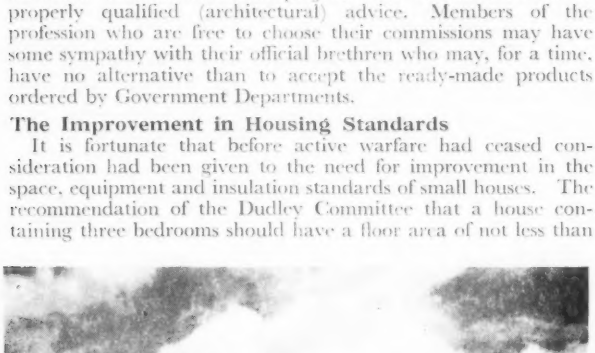
Though I feel diffident in doing so in the presence of so many who can claim to be experts in housing matters, I should like to make a few preliminary observations concerning the construction and planning of the house before commenting in more detail on the planning of the aggregation of these units of living accommodation which in the main constitute the new town or suburb.

The Immediate Responsibility for Housing

In the first place it will be conceded that housing has become, at least for the immediate future, the increasing responsibility of local authorities. The method by which the end is achieved is a matter of far less import to members of the Institute than an assurance that architectural projects will be executed under properly qualified (architectural) advice. Members of the profession who are free to choose their commissions may have some sympathy with their official brethren who may, for a time, have no alternative than to accept the ready-made products ordered by Government Departments.

The Improvement in Housing Standards

It is fortunate that before active warfare had ceased consideration had been given to the need for improvement in the space, equipment and insulation standards of small houses. The recommendation of the Dudley Committee that a house containing three bedrooms should have a floor area of not less than 900 superficial feet marked a distinct step forward in space standards. It stands to the credit of the present Minister of Health that he has given the fullest support to this recommendation despite an earlier but very determined effort to undermine it. So long as this standard remains as the basis for the house for five persons the accommodation necessary for larger and smaller families will be guaranteed.



Schoolway Road, Speke.

Temporary Houses

Despite a general aversion to temporary forms of housing strengthened considerably if born of practical experience, it was realised on all sides that resort to some form of temporary construction would be necessary. There was some difference of opinion whether temporary dwellings should be de-mountable and restricted in their use to redevelopment schemes or should be regarded simply as additions to the normal supply to remain in use until the production of permanent houses could be sufficiently advanced. Whichever opinion may have been the correct one, it was obvious that the responsibility for temporary housing must rest with the Government and local authorities. No other agency could or would undertake it. It is unfortunate that the plans for the first temporary houses were conceived without any reference to local authorities. That prior consultation was desirable and might have led to the avoidance of pitfalls was less likely to be realised by temporary civil servants than by more crusted and experienced bureaucrats.

The narrow frontage bungalow, with which my own name became associated, was almost completely demountable and primarily intended for use in the progress of redevelopment schemes, capable of being moved from site to site as permanent rebuilding proceeded. Despite its estimated saving in cost of about £300 per bungalow it proved to be of less interest to those nearer Ministerial level than to certain junior Departmental officers who watched its erection without licence with some anxiety. Many of us are afraid that the standard of equipment and of construction of certain types of many of the Government's temporary dwellings will result in their remaining in use for longer than the intended period of ten years. It is unfair to criticise unduly. Emergency measures were essential, but in all emergencies consultation with those directly interested is always advantageous.

The Permanent Prefabricated House

I refer to the type of mass-produced house constructed on direct orders from the Government, which has been put forward as an alternative rather than an addition to houses constructed by traditional methods. Some eminent architects have expressed the view that an entire change in normal building technique will result from the use of new materials and new methods of construction. This possibility remains to be proved, but I think it is fortunate that organisations outside the normal house-building industry sponsoring these new methods have realised the desirability of obtaining architectural advice before putting forward their proposals. I do not propose to review the many forms of construction which have been advocated. They will be judged by that cruellest of arbiters—Time—whose judgment cannot be hurried. I would only say with some knowledge of the whims and fancies of the ordinary man that, like the law, it is not sufficient that any construction is right, it must also *appear* to be right. From my own observations I am afraid the ordinary layman may find some difficulty in reaching the latter conclusion. Those who saw reason to oppose the well-protected cavity of the hollow brick wall will find greater difficulty in accepting the mass of voids between inner and outer linings for which some proposals are notable, because if vermin could be harboured in a 2½-in. cavity I imagine that rabbits could be bred in some of the new ones. I will only say that new forms of construction, if they are to supersede traditional forms, must produce houses which are easily recognisable as better, more expeditiously constructed and more economical in cost. So far there is little evidence that this will be the case and in the transitional period many will watch the battle, not

Houses with garages, Speke.

of the styles, but of the techniques, the result of which, as a traditionalist, I am in little doubt.

House Plans

In the planning of the post-war house I preserve an open mind. All plans can be criticised. I intend and desire to deal with each problem as a special problem requiring separate thought and consideration. One of the current and most popular type is that which has a dining recess, entered only from the living room and working kitchen, and possessing a larger hall than was usual in houses of the inter-war period. The prejudices or demands of people in different parts of the country require special consideration and no stock plan of small dwelling can be suitable everywhere. A great variety of plans will be necessary if we are to fit the house to the family and not the family to the house. As an official architect always willing to pick up a crumb or two from the tables of the eminent I would ask that those who plan for the sponsors of special forms of construction should depart occasionally from the realms of semi-detached snobbery and to plan for terrace houses—the detached house is so much easier to build and I am tired of trying to get a successful terrace house plan—which in addition to providing better architectural compositions also ensure that greater degree of intimacy which is more favoured and desirable to-day. Each of us may have our own particular favoured plans. Each of these plans may be open to criticism on some point or other. I believe that all will agree that no task is more difficult than the designing of the perfect small house capable of being built in terraces or otherwise.

Prefabrication v. Traditional Methods

I have mentioned the conditions upon which the prefabricated house may oust that built upon traditional lines, but I do not feel that I should be classed as an obstructionist if I express the hope that as quickly as possible and by accelerated output and reduced costs traditional building will come into its own again. I hesitate to contemplate the face of our land in the future if peppered with thousands of semi-detached standardised dwellings however cleverly their layout may be planned. Ministers are uneasy of the effect of an excess of mass production, for one of the most recent circulars to local authorities suggests that " to secure attractive groupings "—and I really think they mean " in order to relieve the monotony "—it may be desirable to interpose prefabricated houses with *those of other types*, oblivious of the truth that as in physics oil and water do not easily mix it might be found that the exactitude of the machine-produced dwelling was entirely incongruous in close association with the house built of local materials fashioned by the skilled hands of the craftsman. The circular to which I have referred contains another point of interest by its disclosure that, despite the much-advertised claim to reduce cost, mass production cannot yet compete in price with traditional methods.

Equipment

Of equipment I only wish to say that here is a wide and proper field for standardisation and mass production. There is a danger that standardisation and assembly may be carried so far as to relegate the planner to a subservient place with the consequence that comfort in living may be sacrificed for mechanical efficiency in plumbing and heating. It is therefore desirable that the various units of equipment should be capable of a variety of arrangement in the space planned for their reception.

With those preliminary remarks I desire to turn now to the chief theme of my paper : Post-war Housing in its widest interpretation. Ten years ago I stressed the great importance of the redevelopment of our towns to prevent the continuation of that urban sprawl which was absorbing the countryside. Speaking

" *Transformation* "—*in the central redevelopment area, Liverpool.*

quite personally I confess to some disappointment at the curtailment of the many schemes of redevelopment which I referred to in my paper then. By 1939 the City of Liverpool was committed to the redevelopment of no less than 300 acres. Comparatively little had been accomplished at the end of 1939, although this may ultimately prove to be an advantage. The original schemes were restricted by the limitations of the Housing Act. To-day the opportunity presented is of a far more comprehensive rebuilding and we have become conscious that the provision of housing accommodation is but one phase of a great social readjustment. It is for this reason that we cannot properly consider the building of a house without at the same time ensuring that the house unit fits into the pattern of the social unit of the town or neighbourhood. Never before have such opportunities been available to us. Never before has such skilled planning been necessary or the closest collaboration and co-operation of all interests been more essential whether we are building new towns, or rebuilding or extending those already existing.

Dismissing for a moment the consideration of the smaller towns where any additional accommodation may be planned as the natural extension of an existing township, let us try to gain some idea of the magnitude and nature of the problem facing the larger and more seriously war-damaged towns of the country. Taking my own city as an example, where the number of dwellings before the war was 202,000—of which 41,000 had been erected by the Corporation—the City Council has approved a twenty-three year programme for the erection of 91,000 dwellings of which 58,000 would be replacements. It will be appreciated that the forward programme is tantamount to an urban development of the size of almost one half the pre-war city. The problem facing other cities and large towns must be similar, and it is therefore obvious that if we are to ensure the proper growth or redevelopment of our towns some newer and more co-operative procedure must be devised to replace the hotch-potch methods of the inter-war years. I have referred to the increasing responsibilities of local authorities. It is upon them as the directors, if not as the principal executants, that the ultimate responsibility for these great urban developments must fall. If not upon them, then upon some other bodies or corporations armed with an equality of power and control. In this way we may hope to produce examples of practical town planning which will redound to our credit and recreate for future generations those advantages of community life which have been withheld from so many since the cry of houses, and houses only, turned our attentions away from proper community planning. I am sure you will agree that if we are to ensure this sense of community we cannot separate the building of houses from all those ancillary buildings which provide both for the necessities and the amenities of life. Every house built in the future should take its place in some ordered and planned development guaranteeing to its occupants the facilities and amenities which may be necessary for them. In contrast to complete development you will recall to mind some of the large developments which were undertaken during the inter-war period, some by private speculators, others by local authorities — developments which in my view have not and now cannot be properly completed, of hundreds of acres and thousands of houses—dormitory suburbs—in which practically nothing has been done to cater for the essential community activities of those housed in them. With the far greater urgency now existing to provide houses there is a grave danger that these mistakes may be repeated and upon a far greater scale. These mistakes can only be avoided by the completeness of our development plans and I suggest that this completeness is more likely to be ensured if the skeleton planning and the direction is made the responsibility of the local authorities. You will realise that in many single instances developments must be undertaken which will provide housing accommodation for 10,000 to 60,000 persons—developments which will be towns in themselves and in which all the necessary amenities and facilities for full and complete living must be planned and provided for at the outset. I am sorry that it has not been possible for me to show you to-night the final plans for the development at Speke, but they have not yet received the approval of my own Council. They show, however, an attempt to provide for all the various needs of a protected community of about 30,000 persons with all the buildings that will be necessary and with houses for all those who may desire to share in the life of that community. Speke is being built entirely by the local authority under the special powers of a local Act. It will be probably one of the most complete developments undertaken by any local authority in the country. It will be the last of the big developments carried out by the city which will fall to my responsibility and I shall hope to see most of it completed in three years' time. It is of more than particular interest to me because I believe it will prove opinions which I have always held that such developments are best carried out under the control of a single executant and that executant an architect. Every interest has been catered for in the township with special facilities for assembly and amusement, for I believe that it is most essential that we should endeavour to bring back a greater measure of gaiety into the lives of the ordinary people. They should have the opportunity of enjoying all those excitements and pleasantries of life which are too often reserved for those in the higher-income levels. It is for this reason that the central community building will provide, with its dance hall, concert hall and restaurant, for the pleasures as well as for the adult education of the people. You will not be surprised when I express my strong hope that the development will be completed without recourse to prefabricated or standardised buildings. There will, I hope, be a unity in design without monotony, and I anxiously await the completion of a most interesting experiment.

I have spoken with anxiety when referring to development during a period of transition. That anxiety arises from a fear of monotony due to excessive standardisation. Though I am a traditionalist I am not going to plead that we should all become members of the Georgian Group or that we should turn our backs upon every new method of construction or material. I do plead, however, for the widest measure of individual liberty in the design of our home and the layout of our towns. We have reached the stage when typical plans are being prepared for local authorities and when houses constructed under Government contracts are being offered to local authorities for erection anywhere irrespective of local tradition. The urgency of the housing situation may demand these measures, but we must do all we can to hasten the day when the fullest freedom is given to the artist to design and to the craftsman to interpret these designs. Freedom has ever been a characteristic of our race and it is of the utmost importance that we encourage individuality in every sphere of life. The effect of environment is admitted. Unless we are careful we shall create a nation of robots with our excessive standardisation.

Who cannot call to mind some tour through England when they have noticed the rapid change at comparatively short distance in the materials used and designs adopted from town to town? The half timber of Worcestershire, the dry walls of Westmorland, the kidney flints and pantiles of Norfolk, the weather boarding of Kent, the brick and tile hanging of Sussex, the stone of the Cotswold country and the plaster work of Essex. Buildings of local materials fashioned by the hands of the craftsmen. I do not suggest they should be copied but that they should be remembered. In these little towns there was no monotony. It is against monotony in our developments that I feel we must be on our guard. I have been told that at Marlborough, where there are probably about 2,000 houses, no two are alike. Perhaps that is an example of individuality run wild, and yet there is a pleasing unity in the whole.

I can almost hear the whispered questions. What has he told us? I will answer them. Nothing! Nothing that you did not know before. Committees have sat, reports have been issued, questionnaires have been answered, opinions have been expressed. The stage is set: we only need the "players and the props." The people want homes. I have not told you how to plan them or how to build them. I have only underlined what to architects are self-evident truths. Perhaps I may have performed some service by doing this, for in these busy days we are apt to miss the elusive timber of common sense in the dense forest of controls and good advice.

Ten years ago I ended my paper with these words: "Let us take up the call of 'Save the Countryside' and by great schemes of redevelopment effect economies in health and other services and establish in our great towns those conditions which we as architects know to be possible and which those engaged in social work know will make for the greater happiness of our people." To-day may I re-emphasise this call: Let us do everything to save our countryside, the countryside of the little homesteads of craftsmen and cultivators, the rolling hills, the green swards and the laughing waters. In our great schemes of building or rebuilding let us ensure that by the completeness and orderliness of our planning, by our skill and freedom in design and by the standard of our craftsmanship, we bring beauty and gaiety into the lives of our people and recreate that pride of citizenship which can be fostered only by the re-establishment of communal responsibility.

DISCUSSION

Alderman C. W. KEY: It is a very great pleasure to me to move a really hearty vote of thanks to Mr. Keay for what I regard not only as an interesting and instructive but an inspiring address. In the great business of the building of thousands of houses which faces us, I hope that we are going to benefit not merely by the very few good things which were done in the inter-war years but by the many grave mistakes which were made. I hope that in the work to be done in these years ahead we are going to benefit by the work which has been carried out by artists and people with social vision. We must realise that we are not merely building shelter for people, but that we are building communities in which people are going to live and be educated to, I hope, an even higher state of civilization than we have known so far. If that is going to be done adequately then the artists and the men with social vision must create surroundings in which that real social education can be carried out. It will be men like Mr. Keay—men with ideas and vision—who will make better homes and communities for England and better buildings for people to live in and enjoy a higher standard of life.

Mr. C. W. GIBSON: I am very glad indeed to have the opportunity of seconding the vote of thanks to Mr. Keay. I should like to say that I regard it as a delicate compliment that I was asked to come here at all, because I was a protagonist in an argument between the Royal Institute of British Architects and my local authority. I think that my local authority was right and the Institute wrong, but events will prove whether that is so or not! There is one thing which I can say, and I think that Mr. Keay's address has emphasized it, namely, that there is no reason why, in the redevelopment of our towns and cities, even if we have to use some permanent pre-fabricated houses for the sake of speed, we should not combine beauty, good design and utility in the building up of our new housing estates. I think that Mr. Keay had something of the same kind of feeling when he spoke about the development of Speke. In spite of the necessity for a tremendous output during the next few years there is no reason why local authorities should produce houses which are ugly. I think it is possible to use the best architectural science and skill to build up good housing conditions and, as Mr. Keay has said, good housing conditions help to make good citizens.

I have never believed that the slum mind creates the slum. I believe that the opposite is the case. I believe that the large-scale development which has got to be done in the next four or five years can be a success if it makes the utmost use of the skill and artistry of the architectural profession. I am sure that Mr. Keay has helped us on in that direction by his address this evening.

Miss OLIVE MATTHEWS: It would be of great interest to me if Mr. Keay could tell me the proportion of each size of house which Liverpool is proposing to build. I believe that the Ministry of Health give no guidance on that subject. For instance, I should like to know the proportion of two-bedroomed houses to three-bedroomed which is proposed in Liverpool in view of the great number of aged people there are.

Mr. L. H. KEAY: I should not like to give any figures on this subject but the proportion of old people's houses, or houses for single people, is going to be much greater than before the war. We are ahead of other towns in the number of old people's houses we already have. We want to make provision for the whole of the community of Speke. There is no need to worry about the old people because they will have houses, or about the young people because they will have hostels.

The normal house we are building has three bedrooms. Even when a family normally requires only two bedrooms I should prefer them to have three. I think it is a mistake to prevent people who are at the low-end of the wage-scale from having a friend to stay in their house. Therefore I prefer houses with three bedrooms, but some houses will have to have five.

The Rt. Hon. LORD REITH of STONEHAVEN, P.C., G.C.V.O., G.B.E.: When I was at the Ministry of Works the first thing which I did was to ask Mr. Keay to come and join me. Whether he did not like me, or whether he did not like the atmosphere of a Government Department I do not know, but he declined the invitation. I think it will be agreed that it is a credit to him that I, never having met him but being impressed with what I had heard of him, extended that invitation to him.

Mr. Keay's address has been of particular interest to me and I disagree with his own statement that he has told us nothing. He has told us a great deal. I have done a good many things in the last few months with the aid of a committee which is working on the building of new towns. We have produced one interim report; we have another interim report in preparation; but we have still to produce a final report. In the final report there will be a great many things to which Mr. Keay's remarks to-night are relevant, and, therefore, I am glad to have been invited here. I should like to tell Mr. Keay that I greatly admire him for the combination of administrative and artistic abilities which he possesses, and, in addition, I am glad to have been here to-night for what I have learned

from him. I hope to visit Speke before the Final Report of my Committee is published.

The Rt. Hon. DUNCAN SANDYS : I am very glad to see a representative of the present Government here to-night, Mr. Keay, who is no doubt enjoying all the difficulties which every Government has had to face in the past ! I notice, in particular, that the narrow-fronted prefabricated bungalow has been brought forward again. No doubt Mr. Keay has turned it down in the same way as his predecessors did, and for much the same reason.

I should like to say that when I was at the Ministry of Works I also did my best to lean on Mr. Keay in many ways. He has given us to understand to-night that he is a die-hard traditionalist, but he is one of those rare people, a progressive die-hard. He is true to the principles of traditionalism, but no one is more progressive and more adaptable in his approach to the application of traditional methods of building than he. When we were considering the whole problem of prefabricated, mass-produced, permanent houses about a year ago—with which Mr. Keay disagrees but which I feel must play some part in the provision of quickly-built homes at this time of emergency—no one was more helpful than Mr. Keay. When I organised a committee of leading architects from the principal local authorities of different types, Mr. Keay was most generous in giving us the benefit of his experience in the matter of the designing of a certain series of standard plans suitable for mass-produced prefabricated houses. I should like to take this opportunity of thanking him for his co-operation in that difficult field with which he was not altogether in sympathy. I think we have had a stimulating and instructive evening, and I have seldom attended a lecture when an hour has passed so quickly.

Mr. C. BERTRAM PARKES [*F.*] : I should like to ask Mr. Keay what method was adopted in Liverpool to induce industrialists to come to Speke ? Does Liverpool simply prohibit industrialists from building elsewhere in the area and then offer them something in Speke ? I ask because that is one of the problems of planning a new town—persuading the industrialists to come there.

Mr. L. H. KEAY : Some of these factories were built in 1938 for certain industrialists who had come over from the Continent and who had very little money. The Corporation saw that by building the factories for them, industrialists with limited capital could be assisted. The Corporation took the risk of building these factories and they were all leased.

Mr. A. W. KENYON [*F.*] : I should like to say that I think Mr. Keay has given us an inspiring address which ought to be broadcast further afield. His address has been extremely useful for those people who are embarking on any new projects, either in new or old towns. I feel that the inspiration Mr. Keay has given us will be a very great help to us. I have a great admiration for him, and from what he has shown us of Speke I think that he possesses very great vision in spite of the fact that he has told us that he is a traditionalist. What we have seen should help us to make some of our own new developments into something like Speke. I was very interested to see that Mr. Keay has made use of some of the charm of Sweden, which I have always felt should be introduced into our own country.

Mr. J. H. FORSHAW, M.C. [*F.*] : I had hoped that I should not be asked to speak to-night because I have just taken up a new post, and I feel that I am still finding my feet and trying to ascertain how we can move in the direction which Mr. Keay has indicated. There is one great point which I think we, as an Institute, should realise. Mr. Keay has shown us the breadth of vision with which he has approached the problem of housing in Liverpool. Lord Reith has pointed out how modest Mr. Keay has been and I agree with Mr. Kenyon how much we have learned from him. That is all true, but there is another aspect which I think we have overlooked. Mr. Keay spoke of his work in Liverpool and mentioned that he had given a paper there ten years ago, but he has been working on housing for a much longer time than that and I am sure that any young man who has had the opportunity of working in Mr. Keay's office in Liverpool will in his turn help to educate others and spread the gospel of housing with the same breadth of vision, which is exactly what we want in the new world ahead of us.

I think it is Professor Richardson who reminds us that an architect does his best work after he is 60. I do not think that Mr. Keay is an old man but he spoke of retiring from his official post in a short time. We are all filled with admiration for what we have seen and I am wondering, and I am sure others are wondering too, what Mr. Keay is going to produce for us in the future. I think that Mr. Keay has a great work still to do for housing in this country. I congratulate him on his paper and on the interest he has roused to-night.

The PRESIDENT : I am sure you all feel that this has been a most interesting and instructive meeting. I thought that Lord Reith would appreciate certain parts of the paper which were of particular interest to him at the present time. I thought also that he would be interested in Mr. Keay's reference to the fact that housing was not merely housing, but something which includes the amenities of the neighbourhood. There will be an Exhibition opened here next Thursday which illustrates that particular aspect of housing.

Mr. L. H. KEAY : When I started building a pair of cottages at Norwich many years ago I thought that at some time I should like to build a town. That was one of my ambitions and I hope that I shall just be able to realise it. My other ambition was to end my career in London. I should like to assure Lord Reith that the reason why I did not accept his invitation was not because I did not like him or want to come to London ; similarly I did not accept Mr. Sandys' invitation, though I was greatly impressed by his kindness. The real reason was that I had behind me the people who have made me, a loyal staff, and I wanted to go back to them and finish my days with them. When you reach a position such as mine you rely upon your staff. I am only the hands of the clock, my staff are the works behind.

ADDRESS BY THE MINISTER OF WORKS TO THE COUNCIL

THE MINISTER OF WORKS, THE RT. HON. GEORGE TOMLINSON, M.P., ADDRESSED A MEETING OF THE R.I.B.A. COUNCIL ON TUESDAY 9 APRIL 1946

THE PRESIDENT IN THE CHAIR

" When I promised to come to your meeting this afternoon I did not quite realise what I was letting myself in for, in two ways. First, I did not realise that it would be Budget Day, and, secondly, I did not realise that you would be so near to me as you are ! Generally between the speaker and the audience there is a gulf fixed in more senses than one. That makes it more difficult for the audience to throw things, but it makes it more easy for the speaker sometimes. When I spoke just now to your President and asked him what he was going to do, he said he was just going to introduce me and then I was to talk to you. I said that would be all right if you did not expect me to talk learnedly, and he said : ' That will be quite all right.' He realised my limitations, and for that I want to say ' Thanks.'

" First of all, I want to thank you as a body for all the assistance that you have given to my Department during the war and for all the assistance that you are giving and will continue to give us in this period of reconstruction. At the Ministry we have, as you know, a National Consultative Committee, and on that committee we have your representatives, who are always available and willing to help and from whom the Minister can seek advice with the knowledge that the advice given will be free, frank and fair.

" The problems which arose during the war and the problems which arise in turning over the building industry from war to peace were and are very complex. The ramifications of the industry are very widespread, and I have begun to realise that a building is not complete and ready for habitation until all the ancillary components and equipment have been provided. In the

House of Commons the other day I mentioned the fact, in seeking to bring home to the members the complexity of the problem with which we were dealing, that in the statistical bulletins which we prepare on building materials and components there are no fewer than 42 classifications, with innumerable variations. When it is realised that those range from sand and gravel to prefabricated houses and from nuts and bolts to a steel structure, with all the different things that come in between, the magnitude of the provision that has to be made in meeting the requirements of the industry becomes apparent even to the novice.

"Owing to the virtually complete cessation of normal activities during the war, many of the main and ancillary industries have to be set going again from a standing start, and it is not surprising to find that there are considerable variations in the rate at which they start up. As a consequence of this, we find that the supply of certain materials and components is far below the immediate requirement, and this shortage must persist until the production has been raised to the required level. As one of my jobs at the Ministry of Works is to see to it, or to attempt to see to it, that materials are available as and when and where they are required, you will realise that the starting up process with regard to materials is one of my constant and peculiar troubles. As the erecting forces are also building up from a war-time low level, it is almost certain that the position will change from time to time owing to differences in the rates at which the materials producing industry and the erecting forces build up. Never before in my life have I realised to the extent that I am realising now the necessity for synchronisation of the coming into being of the essential factors in the carrying out of an undertaking. I have learned that, so far as building is concerned, the absence of one little thing which nobody has thought about, though it may be a very simple thing which everyone should have thought about, may hold up the completion of a building. I remember in the early days answering a question in the House of Commons with regard to temporary housing. Somebody had asked why we had sent the sides of a house without the nuts and bolts to fasten them together. Everybody had thought about the sides of the house, but nobody had thought about the nuts and bolts until attention was called to the fact that the two sides were no use unless the nuts and bolts to fasten them together were available. I remember that the same thing occurred with regard to some window frames that had been made and that were standing and deteriorating owing to the fact that whoever had been responsible for the ordering of those frames had not thought it necessary to place at the same time an order for the little pieces of brass which keep the window frames in position when they are being erected. I think that the necessity for this synchronisation, for the bringing together of the respective materials at the right time, is now becoming apparent to all who are interested in this particular question.

"The failure to bring into being the respective materials at the right time very often necessitates the finding of substitutes for materials and components which are in short supply, and that often has to be done at short notice. This means that the appropriate modifications have to be made in the design of the buildings, and there is scope and need for a considerable amount of ingenuity. In work of that kind I know that you can assist me, and the people in similar positions, to a greater extent than anyone else, and the architect not only can make but must make a considerable and important contribution in this respect. It will be exasperating work, I know, often calling for a revision of details at short notice, and it will be unsatisfactory, because the thing to be done will be the next best. When a substitute has to be used for that which has been tried and found good, it must be regarded as the next best.

"There is one very important aspect of this matter in which it is essential that the skill and experience of the architect should have its maximum scope. The use of substitutes does involve a real danger that things may go wrong. Unfamiliar materials and processes will have to be used, and the need for supervision will be more acute than when conventional materials are used on well-established lines. I do not think it needs an expert to see that when a substitute is being used greater care is required on the part of the expert in order to prevent mistakes being made. Greater supervision will be necessary, yet a rigid insistence on the letter of the law is not likely to help in difficult times, and in fact work can and very often will be brought to a standstill unless there is some willingness to give way a little where substitutes are being used. I want to submit that the need in these circumstances is for informed and intelligent supervision, and in that connection we must remain in your hands and look to you to bring about that partnership of architect, builder and craftsman which can overcome the difficulties of this time.

"One of the greatest difficulties in getting building done is the shortage of labour, and that will be still more the case when the housing programme is in full swing. The large number of men in the Forces means that the labour supply has been and will continue to be for some time inadequate for the demands made upon it. The position is becoming easier as more Class A men come out. We have already built up our labour force to some 850,000, and it is incumbent upon us to see that these men go to the jobs where they are most needed and not to unessential work. This means that we cannot yet revert to normal practice and do away with the labour and building controls. If we did that, the conditions would be chaotic.

"It seems to me that it is difficult to appreciate, without being on the inside, the vastness of the problems with which we are faced at the moment. As you know from your own experience, the work which has accumulated in maintenance alone over the last six years is enormous. I believe, judging by the applications that are made to me and the various things that are said to me, that the arrears of maintenance work would be sufficient to keep all our building labour employed and to use all the materials that we could produce for a considerable period, without any new buildings being erected at all. Yet, unless we can plan the utilization of our labour in such a way that we do the things which are essential and develop our programme, it seems to me that the problem will become insoluble. The abolition of all controls and the opening up of a 'go as you please' policy, allowing labour to find its level and jobs to take their places according to the desires of the people who are giving out the work or doing the jobs, could not lead to anything other than chaos.

"A mere list of the controls that are still in operation is, I think, an indication of their necessity. There are Defence Regulation 56a, covering the licensing of civil building, the Essential Work Order, and the Control of Engagement Order, not to mention the powers of direction, constituting a formidable armoury in the hands of those who want to get labour to the right job. As the labour force increases, we hope to be able to make less and less use of the labour controls and not to send men to work away from home unless they want to go, but it is not possible at present to make any relaxation in the licensing of civil building. We must see to it that materials and labour are not dissipated on unessential work. In fact, it is not simply a question of seeing to it that they are not used on unessential work; we must see to it also that they are not used on less essential work, for there is so much essential work waiting and needing to be done.

"I hope that you as a body will appreciate what is really the first real attempt made by a Government in peace-time to order a country's building in accordance with its needs and resources. On the one hand, we have a full employment policy, and, on the other hand, there is an unprecedented need for building after six years during which only building for war purposes was allowed. Committees have been set up in all regions to accord labour priorities to the work that needs and deserves them. The time has not yet come when much other work can be permitted, but we have plans ready for meeting unemployment if it occurs in any district during the period of reconversion. Local authorities' housing schemes will qualify automatically for top priority, and with them go urgent projects needed for the country's good, such as hospitals, schools, community centres and factories for consumer goods. The extent to which these will get labour will

depend on the labour available, and the fact that plans are made locally for all except the largest schemes means that we shall be fully in touch with the local situation. This may mean that for the present there will be less building of the type which in previous centuries has given the architects their greatest scope. There will not be many town halls, country houses, cathedrals, churches, public buildings, theatres or cinemas, but I believe there will be no less need for the architect, and he will feel more than he has ever felt before that his contribution is part of the essential needs of the country. The co-ordination of strictly utilitarian work with the best principles of architectural practice is the architect's new and inspiring task.

"Another aspect of building work, perhaps in some ways the most important, with which the Ministry is much concerned at the moment, is the question of output and efficiency. We are doing our best to co-operate with and help the industry, which has already undertaken to give the matter special attention and to take certain steps to increase output. Through the Chief Scientific Adviser's Department, we are building twelve sets of fifty houses, where, with a series of observers, we are working on a technique of measuring work under closely scrutinised conditions. The results and the conclusions to be drawn from them will be of great interest to all architects. So far as the building industry is concerned, I think this is a new departure, and it is to be hoped that the architectural profession will not only welcome these experiments but also pay continued attention to the question of efficiency and output in the future. New technique, new appliances and the extended use of plant are all vital matters, and great strides may be expected.

"I should like now to say a few words about the releases that have taken place from the Forces, in which I know you are interested. Up to 28 February, approximately 10,300 architects and surveyors and their assistants had been released under Class A, and the corresponding figure for Class B is 4,402, which makes a total of some 14,700 people coming out of the Forces into your profession. At a meeting of the National Consultative Committee which was held on 19 December it was decided that the control of entry into the building trade should be discontinued. I announced that it was being discontinued by amendment of Regulation 56a, and that was laid on the table of the House of Commons on 20 March. It is, however, necessary to continue registration under the Regulation for the purpose of maintaining the control of terms and conditions of employment and collecting statistical information. When control of entry into the trade was originally introduced, a definite undertaking was given that when 75 per cent. of the men who had been called to the Forces had been demobilised the control of entry into the trade would be discontinued.

"I should like now to say a few words with regard to materials, in which I am sure you are interested. The Institute is probably aware that several Government Departments are concerned with the industries which produce building materials and components. The Government has considered, as in the case of munitions of war, that it is convenient to nominate one Department to be responsible for negotiating with each industry regarding the production of building materials and components and the prices thereof, and the Departments concerned are referred to as production authorities. The principal production authorities are the Ministry of Works, the Ministry of Supply and the Board of Trade. The Ministry of Works generally is responsible for the heavy materials, the Ministry of Supply is responsible for fitments and items produced by the engineering industry and for light castings, structural steel, etc., and the Board of Trade's responsibility covers timber, paint, distemper and wall paper. The Ministry of Works, in addition to being a production authority, is responsible for the adequate distribution of all materials, including those of the other production authorities. All the production authorities are busily engaged in doing everything possible to build up the labour forces in the building materials industries, in order that building shall not be held up by a shortage of materials. There are signs that production is increasing in some cases, but we do not propose to relax our efforts until each producer has all the labour that he requires.

"It may be that in this, as in other matters, you can be of assistance to the Government by emphasizing, wherever and whenever the opportunity occurs, the necessity for putting our backs into the production of those things which are needed for the rebuilding of our country. It seems to me that we have reached a stage in the reconversion from war to peace at which the assistance of all men and women of goodwill is needed. In the building materials industries for which the Ministry of Works is responsible as the production authority the great need at the moment is for labour. We cannot build houses in great numbers without bricks, and bricks are available only when labour is available to manufacture them. That is true of everything else that is in short supply, and it seems to me that, just as in the difficult days of the war first one and then another of the things which were essential for the maintenance of the efforts we were making had to be put in the forefront, so now the materials which are essential for the rebuilding of our country must have prior place.

"I know that in these circumstances and in this period of rebuilding you as architects are straining at the leash. There are so many things that you want to do and that you cannot do at the moment. There are so many plans you want to draw and to make which for the moment must take second place. When I say that in my Ministry we are anxious not only for your co-operation but to assist you to the best of our ability to arrive at that stage at which you can be engaged to your heart's content, I am expressing not simply a pious hope but a heartfelt desire, for the sooner that time comes the sooner we shall have overcome our difficulties.

"In the meantime I plead with you that, just as in days past you and the members of your profession built many great buildings of which we are justly proud, so in this period of reconversion which is now taking place and in the rebuilding of the country which is beginning you will make a no less epic contribution. If it should be that that contribution in the immediate future is in the shape of houses that are a delight to the common people, then, instead of people living in what are called brick boxes covered in with slate and admiring at a distance the buildings upon which architects were engaged in days past, they will turn round as they come out of their front doors and look at their own houses and take a pride in them. You can make a great contribution. You already have made a great contribution in this respect, and it is in the hope and belief that we shall have the assistance of all who are interested in this great task of the rebuilding of our country that I come to you this afternoon as an outsider, anxious only to help in the carrying out of what I believe to be a sacred promise. That promise was made during the worst days of the war, when we said that, if by any chance we should overcome our difficulties and continue to live in a world in which we were free to express our thoughts and to do as we desired, the first thing we would do would be to rebuild our country in a way that was worthy of the sacrifices that had been made. I ask you to help me, to the greatest possible extent, to keep that promise to this generation."

THE "BUILDING NOW" EXHIBITION

OPENED BY THE RT. HON. LEWIS SILKIN, M.P., MINISTER OF TOWN AND COUNTRY PLANNING

Reports of Speeches and Description of the Opening Ceremony

The Minister, accompanied by the President, inspecting the Exhibition.

The PRESIDENT: Before I ask the Minister to declare this exhibition open, I would like to say how very much we appreciate so many representatives of local authorities and Government departments coming here to-day. We feel that the interest which they have taken in this exhibition and, it is to be hoped, the benefit they will derive from it, will be of assistance not only to their own local authorities but to those of us who have to carry out their schemes.

The Royal Institute of British Architects felt that the first of its post-war exhibitions should be on the two matters which are most urgent in our national reconstruction, namely, homes and health. We have made an attempt to show that post-war housing schemes must provide close to those houses everything which is necessary for the family life; the schools, clinics, shops and recreation, both indoor and outdoor—in fact what we describe as the "neighbourhood unit."

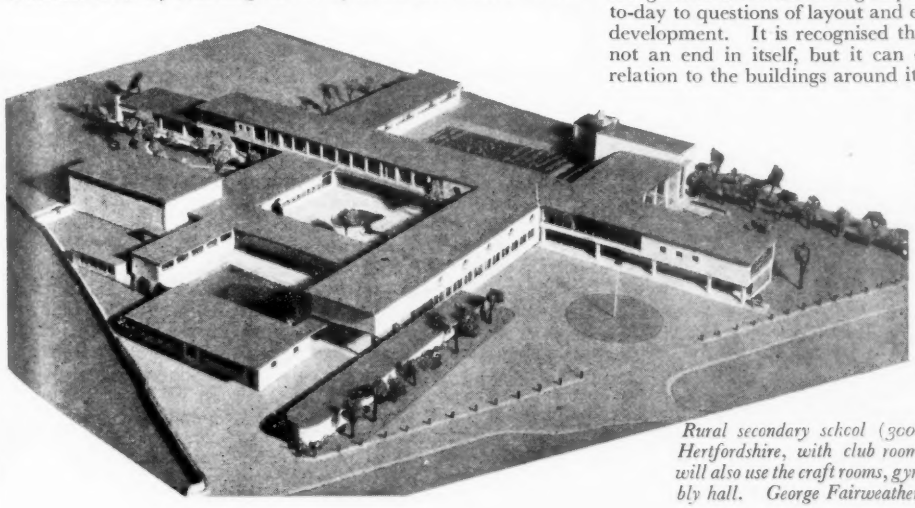
With regard to the houses, we would still stress the need for the greater employment of architects not only in the planning of the houses and their design, but also in the layout of the building schemes themselves. We have upstairs examples of both pre-war schemes and schemes which are being prepared for post-war, and we hope they will show you what it is possible to do with good design and good planning.

With regard to schools, again we hope that the post-war schools will be worthy of the great new Act which is shortly to come into operation, and that they will be not only good and useful but also good to look at. The remainder of the exhibition is taken up with examples of what we call community or welfare buildings, clinics, welfare centres and so forth.

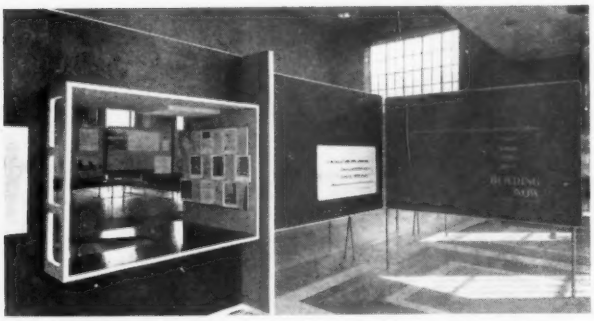
I would only say how delighted we are to get the Minister of Town and Country Planning here to open this exhibition. I was fortunate enough to come into contact with him when working on something which was less profitable—munitions—and I am glad to know that his energy and vision have been encouraged by the Government in such a vital part of our post-war lives as this problem of the housing of our people. I now have very much pleasure in calling on the Minister of Town and Country Planning to declare this exhibition open.

The MINISTER: I regard it as a very high privilege to have been given the opportunity of addressing so many eminent members of the architectural profession and such important representatives of local authorities and of other sections of public life in this country as are assembled in this hall this afternoon. The Council of the Royal Institute of British Architects have carried out a considerable amount of planning work for the education of its members and of others, and in particular I remember with considerable pleasure and profit the work that they did on the London Plan. They recently had an exhibition of the Middlesbrough Plan and during the war there was an exhibition held on housing in the United States and on war damage to famous buildings in Russia. This exhibition is therefore in the tradition of the Royal Institute of British Architects and I should like to congratulate them on their enterprise in having organised it at this time.

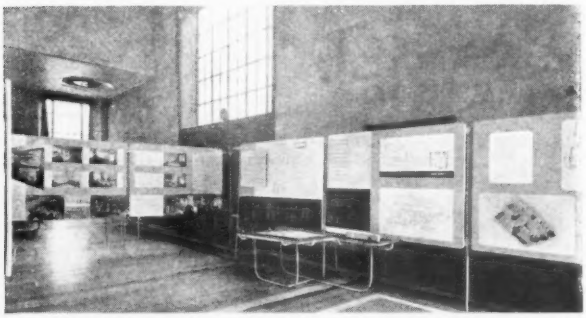
I regard the invitation to me to open this exhibition as a recognition of the increasing importance which is being attached to-day to questions of layout and environment in connection with development. It is recognised that the erection of a building is not an end in itself, but it can only attain full significance in relation to the buildings around it and to its whole environment. It is a welcome fact that there is to-day a very rapidly-growing recognition of the importance of town and country planning. The local authority interest in the architectural profession is also extremely great and growing and it is therefore very encouraging to find the two bodies of public life, the architectural profession and the representatives of local authorities, assembled together in this hall.



Rural secondary school (300 children) and community centre in Hertfordshire, with club rooms and games rooms for adults, who will also use the craft rooms, gymnasium, swimming pool and assembly hall. George Fairweather and R. Furneaux Jordan [F/F.]

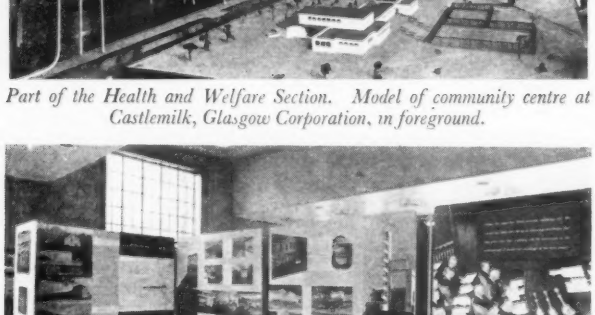


The entrance of the exhibition. Desk for attendant recording visitors and selling handbooks on the left. Slogans and title on the right.



Part of the Housing Section. Plans and Perspectives of flat schemes on the right and two models of L.C.C. housing.

Part of the Health and Welfare Section. Model of community centre at Castlemilk, Glasgow Corporation, in foreground.



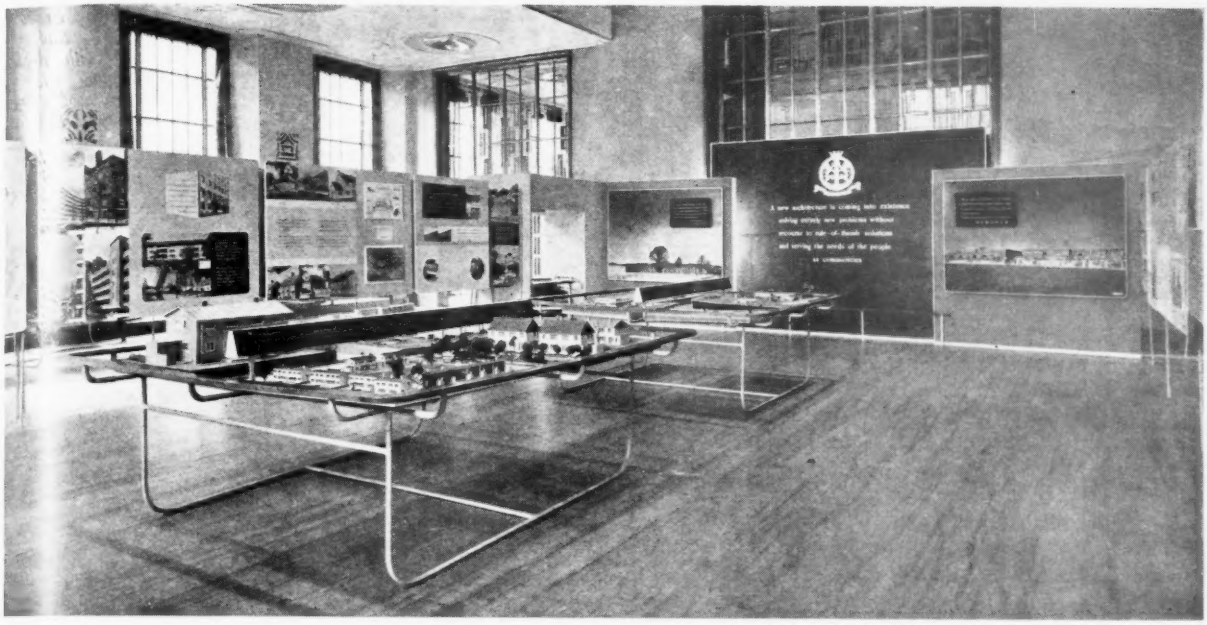
The end of the exhibition. Left: part of the Health and Welfare Section. Right: two screens which draw attention to the eventual need for amusement buildings and for new municipal buildings.

The local authorities are going to become more and more responsible for the development of all kinds of buildings, including industrial buildings, which I recognise is not one of the subjects of this exhibition, but we shall certainly find in the next few years that the greater part of development throughout the country will be carried out by local authorities. It is vital that those architects who are engaged in this work in conjunction with local authorities should be adequately equipped to discharge this public task, and I hope I may be forgiven if I say a few words about the qualifications which I think members of the architectural profession ought to possess in the discharge of their functions.

I think if the architect is to do his job properly he must be imbued with a spirit of town planning. He must appreciate its vital significance, and it is a regrettable fact that in some cases plans are submitted to local authorities by members of the architectural profession which certainly do not conform to the best principles of town planning. I noticed a caption on the wall when I was going round the exhibition containing a quotation from a speech made by a colleague of mine at a time when she had less responsibility for what she said than she has to-day. She stated that it should be a penal offence for any local authority to employ anybody other than an architect in connection with their construction. I should also like to make it a penal offence, while discussing criminal law, for any architect to submit proposals to local authorities which are not in harmony with the best town planning principles! Secondly, I think, particularly in relation to work which affects the lives and the happiness of so many members of the community, that the architect should be a man of wide interests and culture. He should understand the life and needs of the people for whom he is catering, and he should be a much-travelled person, a very widely-read person, and I think perhaps he should be a person taking an active part in public life. Indeed, I am glad to note that more and more members of your profession are beginning to take an active part in the public life of this country. Then I would like to say that a further qualification both for members of the architectural profession and for members of local authorities is that they should appreciate the importance of design and that they should have very good taste.

It is a strange thing that I should say this to an assembly of architects, but when one looks around and sees the buildings that have been erected in the past twenty-five years, I think that one must recognise that there is considerable scope for improvement in design. When one looks at local authority housing, excellent as it is, one is oppressed with a sense of monotony; you cannot help but recognise local authority housing in any part of the country. I suppose in the majority of cases these houses have been erected by architects. Perhaps the best that one can say from the point of view of design is that they are somewhat better than the corresponding houses built by private enterprise, but that is not saying very much. I recognise that architects in the past in connection with local authority housing have been very greatly hampered and restricted by their terms of reference. When you are asked to build little brick blocks of 780 sq. ft. containing three bedrooms, a reception room and a kitchen, and so on, I recognise that there is not a great deal of scope for ingenuity and the exercise of those qualities which one expects from the architectural profession. That is going to be somewhat better, for the Minister of Health has recognised the inadequacy of 780 sq. ft. and there has been a substantial increase in the permitted area of a house. Nevertheless, I do feel that we ought to have done better than we have done in the past, and I look forward to the lead being given by local authorities in the improvement in design in all kinds of development carried out by them.

On going round the exhibition I was greatly encouraged by what I saw. I believe there is, as is evidenced by the exhibition here, a growing appreciation of the importance of beauty and of good design in our buildings, and this exhibition will have served a most valuable purpose if it is visited by large numbers of



The centre of the exhibition. Part of the Housing Section on the left and the beginning of the Schools Section on the right. Models of houses, blocks of flats and schools in the centre. The R.I.B.A. badge and slogan are floodlit.

members of the architectural profession and if they take a lead from what they see here.

I should like to congratulate particularly those local authorities who have had the enterprise to send representatives to view here this afternoon the display which so well illustrates the need for community planning. It illustrates so well the truth which cannot be too often repeated that good planning, whether of buildings or community, costs no more than bad planning, and good planning over a term of years pays a handsome dividend both to individuals and to the community ; whereas bad planning imposes an inevitable and increasing burden upon both.

These are some of the grounds on which I congratulate the Royal Institute of British Architects for staging this display in their handsome building. I have very great pleasure in declaring this exhibition open, and I would like to express the hope that it will draw, as it should, many visitors, professional and otherwise, to see it, and that those who see it will profit by it as I am sure they will.

MR. H. V. LOBB [*F.*], *Chairman of the Exhibition Committee*, in proposing a vote of thanks to the Minister, said : I have very much pleasure in proposing a vote of thanks to the Minister for opening this exhibition and for the encouragement he has given to local authorities and to the architectural profession by his courageous words and action in the field of planning. Although courageous words and action do not always go hand in hand these days, we do appreciate the action he has taken.

We are very glad to see this afternoon so many representatives of local authorities, and they, particularly, will appreciate that many of the schemes in the exhibition cannot materialise until the Bill to deal with that very vexed question of compensation and betterment is passed by Parliament.

Your very kind references, Sir, to the exhibition are very much appreciated, and you may be interested to know that after one month in this building the exhibition will tour the country, starting at Birmingham in June. I feel that it will show local authorities and the public as a whole that it is possible, even in these difficult times, to build now for health and happiness.

The vote of thanks was then carried.

The PRESIDENT : Before inviting you to proceed to the Florence Hall and view the exhibition I cannot help making reference to one remark which the Minister has made, that is with regard to the dreadful appearance and design of so much of our pre-war housing. I hope that this exhibition to-day will show that it is not necessary, providing local authorities get proper architectural advice. I am afraid that the cause of all the trouble in the past and the dreadful eyesores we see about the country to-day is because proper architectural advice was not obtained.

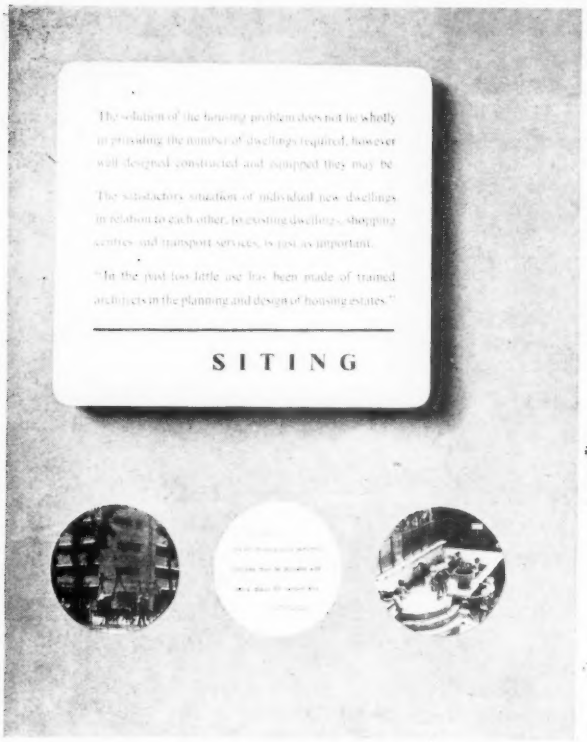
The Opening Ceremony

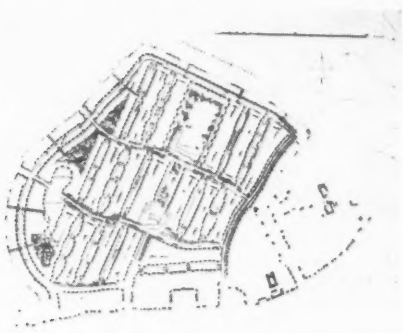
Nearly 500 official representatives of local authorities attended the opening ceremony. Indeed the response to the invitations to laymen was so heavy that a few days beforehand a note had to be circulated to a number of London architects asking them not to attend the ceremony ! As it was, the Henry Florence Hall was uncomfortably crowded.

Some of the lay visitors from the provinces began arriving an hour before the ceremony with the admitted intention of having a good look at the exhibition beforehand. They were wise to do so. The Henry Jarvis Hall and the Foyer (with the disappearing wall down) was full for the Minister's speech. Some time after the opening ceremony, the representatives of local authorities met again in the Henry Jarvis Hall for an informal talk by the Minister.

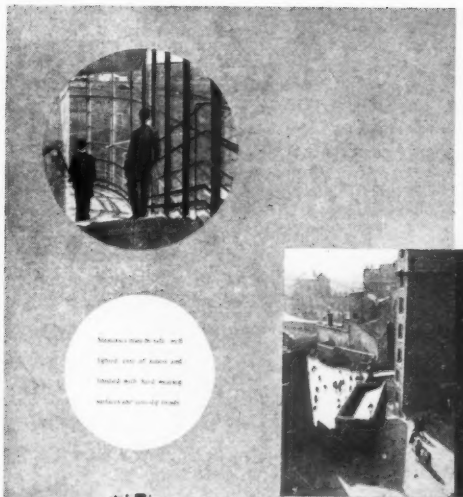
This is by far the most successful opening day which any R.I.B.A. exhibition has had. While it reflects the extent of the present public interest in housing, no little credit is due to the excellent publicity organised beforehand by the Exhibition Committee.

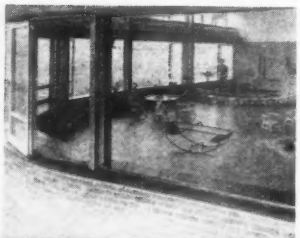
Since the opening day, attendances have been well above the pre-war average. Several members of Parliament availed themselves of the Institute's invitation to visit the exhibition. One group of eight was conducted round by the Public Relations Officer. The Minister of Health and the Minister of Works also paid private visits to it.


The solution of the housing problem does not lie wholly in providing the number of dwellings required, however well designed, constructed and equipped they may be.
The satisfactory situation of individual new dwellings in relation to each other, to existing dwellings, shopping centres and transport services, is just as important.
"In the past too little use has been made of trained architects in the planning and design of housing estates."
SITING



A screen in the Housing Section dealing with siting. The plans are of neighbourhood units at Letchworth and Wythenshawe.


"Gay and exhilarating colours do not cost more than county council brown or municipal green."
Mr. Henry Morris, C.B.E., M.A. Chief Educational Officer to Cambridgeshire County Council
If children are taught in surroundings in which they can feel some real pride, they will have a chance to develop into citizens with a respect for property and a feeling for order and beauty.
Classroom windows should face slightly east of south and the plan should separate those rooms where noisy work is carried on from those where quiet is necessary. Construction and planning should allow flexibility in use and ease of extension.



A screen in the Schools Section illustrating points of principle in school design and planning.

A screen in the Health and Welfare Section illustrating the architectural work of the Miners' Welfare Commission.

The amenities planned and provided for mining communities are extensive.

1. At the pit, pithead baths, canteens, medical treatment centres.

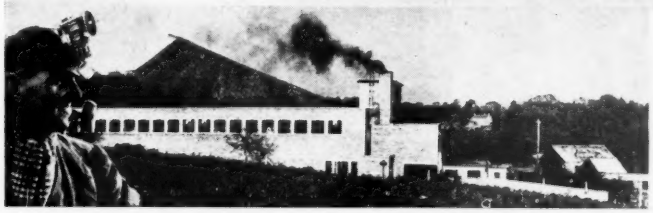
2. Near the miners' homes: community and adult educational centres, youth clubs and sports buildings.

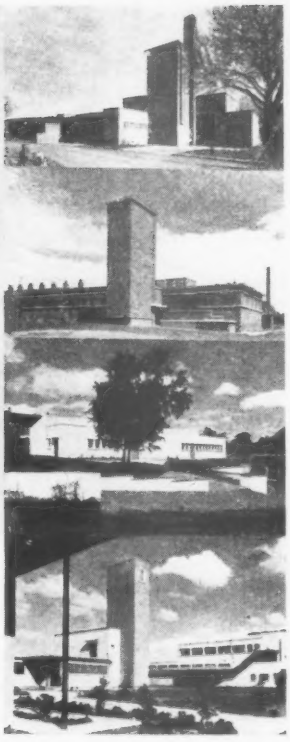
3. In the country: convalescent homes and rehabilitation centres.

The initial cost of these buildings is met from the Miners' Welfare Fund, but they are self-supporting in upkeep.

MINERS' WELFARE COMMISSION

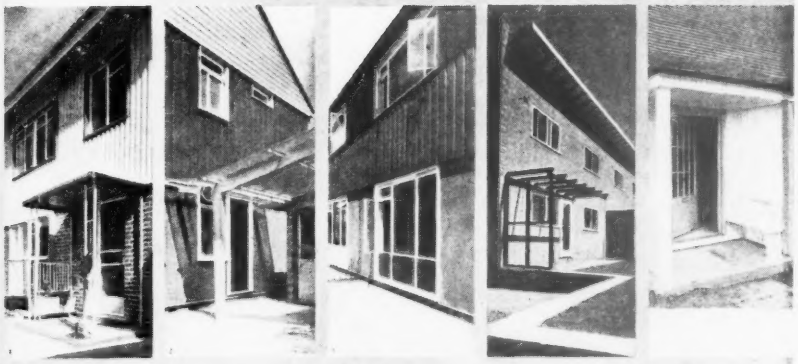
"Art owt to do with baths, lad?" asked an elderly miner of one of the Commission's architects: "I'd like to tell you I'm a fool. When they talked about baths I thought nowt of 'em. When they were building 'em I thought nowt of 'em. When they were opened, I still thought nowt of 'em — but I were a fool!"

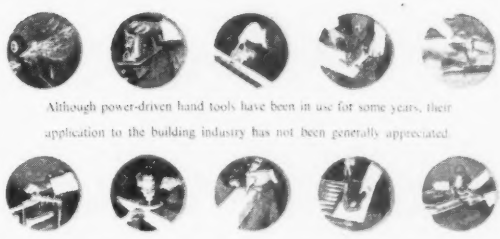




A screen in the Housing Section indicating the uses of prefabrication and drawing attention to the use of powered hand tools.

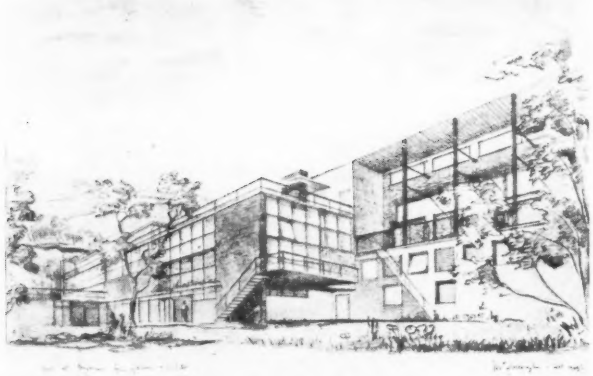
Many items of construction are already largely standardized: doors, windows and sanitary fittings. Prefabrication goes farther and includes steel frames, walls and roofs. Standardization, and limitation in numbers of types of fittings made, means that they are much cheaper and can achieve higher qualities of design.



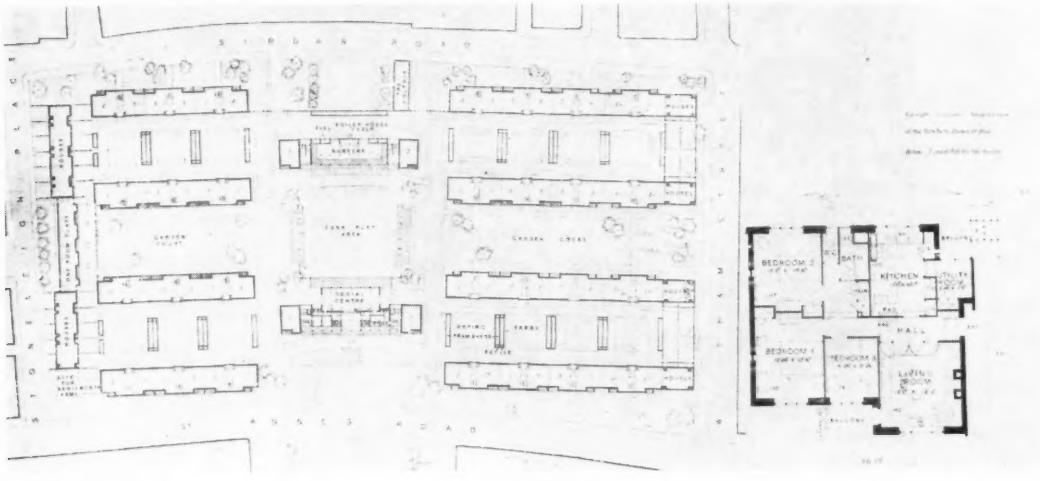


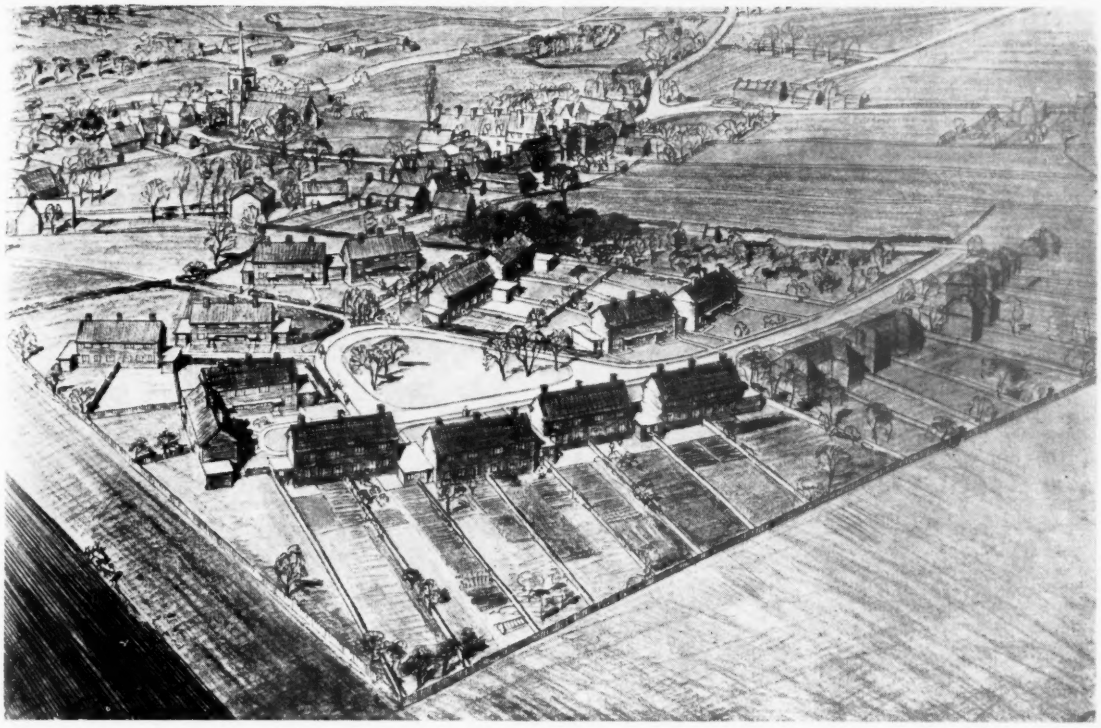
Although power-driven hand tools have been in use for some years, their application to the building industry has not been generally appreciated.

Top and bottom. Rehousing Scheme for the Royal Borough of Kensington. Edward Armstrong [F.] and Brian O'Rorke [F.]. The scheme includes houses, three-storey flat blocks of one to four rooms and eight-storey flat blocks with lifts. There is to be a social centre, equipped playgrounds, and a day nursery.

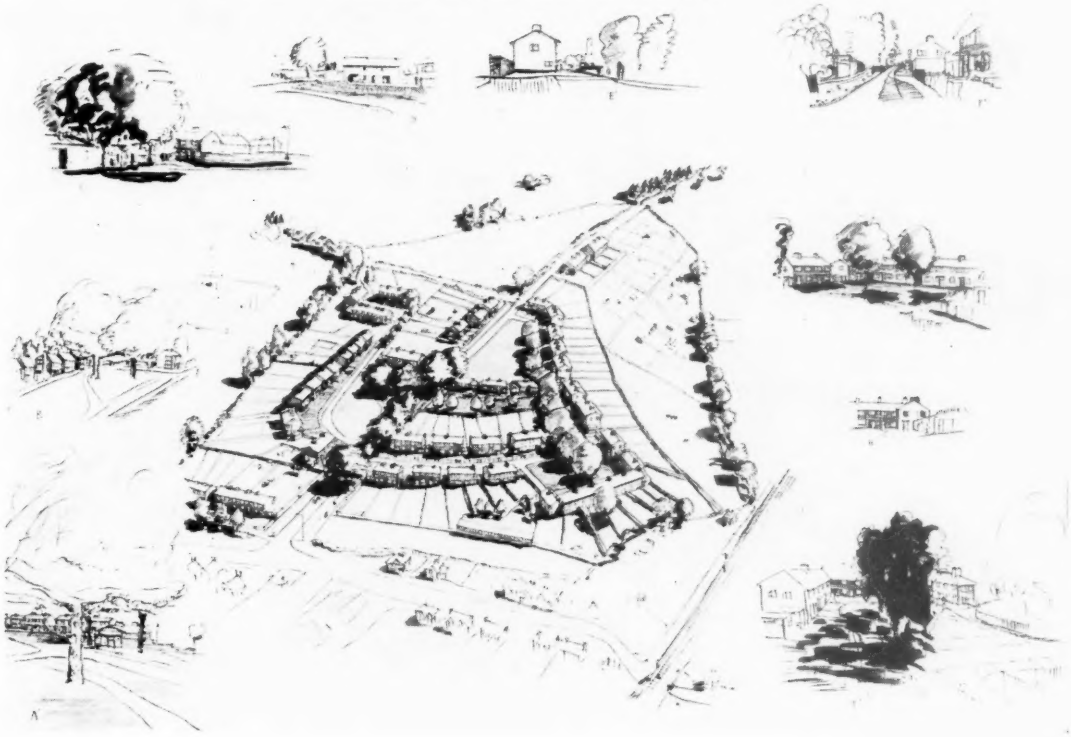


Community Centre at Brynmawr. C. S. Mardall [A.]. Drawing by Myerscough Walker.





Above : Housing for Broughing U.D.C., Herts. Mauger and May [F/F.]. Below : Housing for Epping U.D.C., Essex. Gerald Shenstone [F.] with Richard Sheppard [F.].



THE 108th ANNUAL GENERAL MEETING

7 MAY 1946

THE PRESIDENT IN THE CHAIR

The Annual Report

The PRESIDENT : I have to present the Report of the Council and Committees for the official year 1945-1946 and to move its adoption by this annual general meeting.

The chairman or other representatives of all the Committees whose reports are appended to the Council's report have been asked to attend this meeting, and I think most of them are here, so they will be in a position to answer any questions which may arise in connection with the reports.

MR. J. L. DENMAN [*F.*], Hon. Treasurer : I have pleasure in seconding the motion.

MR. F. R. JELLEY [*A.*] : Will you take an amendment now ?

The PRESIDENT : Yes.

MR. F. R. JELLEY : I wish to move that the annual report be referred back. I do so for two reasons, the first of which is to direct attention to the finances of this Institute, and the second is in order to direct attention to the illegibility of the annual report as published in the current JOURNAL.

I attended an annual general meeting of this Institute in the year 1939, I think, and drew attention to this fact then. I remember it very well because I had occasion to direct attention at that time to the fact that I did not think that the holding of a dance in this Institute on Armistice night, to which the public were admitted on payment of a few shillings, to be a very dignified procedure on the part of this Institute. My remarks were greeted by rather ironical laughter, and I remember being publicly rebuked by a statement that dancing at the Institute signified the return of the Institute from imbecility in war to sanity in peace, or something to that effect.

I am an Associate Member of the Institute and I am asking the Associates of this Institute to sit up and take a little notice of these annual balance-sheets. The Associate class is by far the largest in the Institute, but it is proportionately, I should say, far less represented on the Council than any other body.

I want to draw attention to this Annual Report which is published in this JOURNAL. I am afraid I cannot read you any piece of it because, frankly, I find it illegible ; but if any member has brought a microscope with him I hope he will check my arithmetic. According to my calculations there are over 5,000 Associates in this Institute and there is a mortgage on the premises of £79,000 odd. Every year 1,100 Associates' subscriptions go in mortgage interest alone. 425 Associates' subscriptions seem to go in something called " Public Relations Committee," and 425 Associates' subscriptions seem to go into something to do with provincial members' travelling expenses.

I am afraid it is not quite good enough. Can you imagine, for instance, the effect on any stockbroker of the publication of the annual balance-sheet and accounts of a joint stock company if they were in illegible type ? I have a pretty good idea what advice the stockbroker would give his client who held stock in such a company. It would be advice to sell out.

On page 252 in very much larger print than the annual balance-sheet it says : " Annual Report continued from page 219." Then it continues as follows :—" It is impossible to approach the rapidly-expanding activities of our work on the present basis and without improved revenues, especially bearing in mind the great change in monetary values during the past few years. This can only be effected by increases in members' subscriptions—a matter which is at the present time receiving serious attention by the Executive Committee and Council." I venture to suggest that this is Portland Place, but, according to this extraordinary document, it might just as well be called " Cuckoo Land."

MR. J. L. DENMAN [*F.*], Hon. Treasurer : We have just listened to a rather remarkable and rambling statement which, I fear, leads us nowhere. We have not even had a resolution or an amendment, and to speak in this vague airy-fairy manner is not helpful to anyone—not even to the Associates whom the gentleman purports to represent. He speaks of a statement he made in 1939. We have travelled far since 1939, and we have been through an amazingly difficult time. I would say that rather than quarrel with the work of the Institute there should be some recognition of the vast amount of work that has been done. We have heard various nouns and adjectives—words like " imbecility "—and it is difficult to reconcile those remarks with the amount of work that your representatives have carried out on the various committees. You elected your representatives and they have served on numerous committees ; they have done their best to represent you in every possible way. If it were not for the work of my predecessor, Mr. Sylvester Sullivan, as Hon. Treasurer of this Institute, the finances would have been in a very different position. It is very disappointing that there should be such an attitude in view of the very great amount of work that has been done.

There is another aspect of the matter, namely, that anyone serving on these committees or attempting to serve this Institute must take a catholic view of it. That view must not be one-sided or deal with only one element—the Associate members. We have to think of private practitioners, the salaried members, we have to think of various categories of membership and think of them as a whole and in no way in a sectionalised manner. I do not think I can say anything further because there is nothing specific to answer.

Employment of Architects

MR. L. K. WATSON [*A.*] : I would like to say a few words on returning to the Institute after having been away for the whole of the war. I am not quite sure whether any of the committees will feel themselves particularly interested in what I am going to say, but I would like to get it off my chest.

Anybody, perhaps a year ago, who was in the Forces thinking ahead—thinking what things would be like when he came out or after he had been out six months, would have imagined that he would be very busy. If you speak to any layman who is not in the know and tell him you are an architect, he will say : " You must be snowed under with work and doing pretty well." That is the common impression. I expect you have had it said to you and, to a certain extent, it is true. I was a bit astonished to read in the JOURNAL a few weeks back an official reprimand for certain architects who had not kept abreast of their obligations in housing. That seems to me to be very serious, because it might have unpleasant repercussions on the rest of the profession. I think I am right in saying, however, that that is not general, and that architects in private practice on the whole are going through a very lean time.

I suggest that if we go on like this when there is obviously so much work that ought to be done it is bad organisation on our part, and on the part of the country as a whole, which is expecting to get services from every branch of the community, especially in connection with the building trade. It is undoubtedly a fact that in a few years' time there will be a great boom in building, when the industry is reorganised, when the housing shortage is easing off and other things which are necessary are being studied and put into effect. When that time comes I would not be surprised to find that the bottle-neck is not materials or labour, but the difficulty in getting plans, specifications and quantities ready. They all take a lot of time, and the sort of

building we are going to do in the blitzed areas and re-development areas is going to be difficult. It will be on old sites and will require a considerable amount of skill. Each site will have to be worked out as a special case and it will be different from the housing which is being done now. I suggest the time will come when there will be a slowing up of building if we are not careful on account of our not having done enough work now.

I am suggesting—I admit I have no great knowledge—that people in authority are not aware of this situation. I feel that the various Ministers and building owners and people whose business it is to set the work in motion do not realise that architects now, as a whole, are slack, and that now is the time to have us do our work so that when we are able to get started the drawings and everything else will be ready. In support of what I say, one would have expected to find twenty or thirty competitions running for all the buildings we require in another two years, but I think I am correct in saying that at the moment there is not one.

I went to the Royal Academy to-day and found the Architectural Room was the smallest room in the Academy and I felt something was wrong. We have an excellent exhibition upstairs, and if only that could have been held at the Royal Academy—I know it could not have been—or on that scale and with that vision, we would have been doing more towards what I feel architects ought to be doing. Individual architects no doubt are trying to get work and they are telling everybody that they can do it now ; but I put forward the suggestion—and I am open to enlightenment—that perhaps the Institute is not doing all it could do to bring before those in authority the fact that at the moment we are not working as hard as we would like.

In conclusion I should like to thank those members of the staff of the Institute and members themselves who put in such a lot of hard work whilst many of us have been away in order to keep the Institute in the flourishing state in which we find it to-day.

MR. J. R. EDWARDS [*F.*] : I have listened to the last speaker with great interest, and I feel that on some points he has answered the previous speaker. We have just heard it stressed that the Institute must, in every proper and conceivable way, create publicity, because that is the main drift of the last speaker's remarks. It must put the profession of architecture on the map. That, of course, cannot be done without money, which fact might answer some of the criticisms of the previous speaker.

I do not think that the last speaker was speaking in a critical way. He was merely stressing that point, and to that I would like to say quite sincerely that those who have been working closest to you, Mr. President, through the last three years will say, with the utmost assurance, that you have done everything in your power directly with every Government department that is concerned in any way with building, and in every manner which is possible, through the stress of war, to keep the profession of architecture, the individual members of the profession as well as this Institute, in full touch and on the map.

One so often finds—it is natural and understandable—that we who do know the work that is done have to explain that it is being done, and that you, Sir, have, with unremitted effort, done that for the last three years.

THE PRESIDENT : I can assure Mr. Watson that the whole of the Institute and its committees have done everything that is humanly possible towards the ends which he has mentioned with, I think, a very great deal of success. I think it is true to say that the prestige of the Royal Institute stands higher to-day than it ever has in its history.

I think most of his criticisms were directed at Government departments and clients and not at the R.I.B.A., and I agree with him. We are, however, going through difficult times, and all we can do is to peg away and hope for the best.

The Council to-day had a long debate on the difficulties which architects are experiencing at the present time owing to the increasing number of forms to be filled in, and the restrictions on material and so forth. It is not easy ; but I can assure you that everything which can be done is being done.

I will now ask you to vote upon the resolution as follows :—" That the Report of the Council and Committees for the official year 1945-1946 be approved and adopted." (*Carried with one dissentient.*)

The PRESIDENT then moved a hearty vote of thanks to Mr. H. B. Glanfield [*F.*] and Mr. John Summerson [*A.*] for their services as hon. auditors for the past year, which was carried with acclamation. Mr. H. B. Glanfield and Mr. John Summerson, being eligible and willing for re-election, were unanimously nominated as hon. auditors for the current year.

The Presidency of Sir Percy Thomas

MR. J. L. DENMAN, Hon. Treasurer : I am sure you will agree with me that we should not allow this occasion to pass without some expression of our gratitude to our President, Sir Percy Thomas, for the enormous amount of work he has done for the Institute and the profession, not only during the past three years, but the previous two years when he served as our president. Like the good gardener he has green fingers, and his planting comes to fruition.

I think probably one of the most important pieces of work to-day is that of the Public Relations Committee in re-establishing relationships with various governmental and other bodies. Here our President has done extraordinarily good work. I think, too, that he will agree with me when I say that his predecessor, Mr. Ansell, also did very good work, possibly during an even more difficult time ; there was absolute frustration in those years, and there has been until last year when things were gradually coming to life. I say without fear of contradiction that the activities of this Institute are greater to-day than they ever have been. Therefore, I ask you to bid our President farewell at this his last meeting in the usual way. (*Prolonged applause.*)

THE PRESIDENT : This is something which is not on the agenda, but I do appreciate very much the spirit in which Mr. Denman made those remarks and the way in which you received them.

This is my last annual general meeting and I am obviously in two thoughts about saying farewell to the R.I.B.A. It has been so close to me for so many years, and I have had so many close contacts, not only during the five years that I have served as president, but many other years since I first came up here representing an allied society. It has been a grand time and I would not have missed it for anything. I am only sorry that even those five years have come to an end.

I do feel, however, that I will leave the Institute in good hands and in good form. It is only those, as Mr. Edwards said, who are in touch with the Institute who know what a marvellous institution it is. I can say quite easily that there is no other professional organisation in the world quite like the R.I.B.A. There is none, for instance, that controls the destinies of architects throughout the Empire and not just a national society. But, apart from that, the way the work of the Institute is done by its own members—I am excluding for a moment the staff—is marvellous. There are men who do not become presidents or vice-presidents and who have given a lifetime of service to committees of the R.I.B.A. I have seen it and I cannot express sufficiently my admiration for them because really they are the backbone of the Institute and we all ought to be grateful to them. They attend week after week and as they grow older they pass away. They have given amazing service to the Institute they love. They are the people who have put the Institute in the position it is to-day, and I am glad of this opportunity of paying a tribute to the ordinary rank and file of committeemen of the Institute.

With regard to the staff, we have always been fortunate ; and I go very happily in the knowledge that the mantle of Sir Ian MacAlister has fallen on such a worthy successor as Mr. Spragg. I am certain, too, that those who, in the short time that he has been with us have become acquainted with Mr. Essame, will feel that the line of succession is in good hands.

Nominations for the 1946 Council

In accordance with a decision of the Council candidates nominated for election have been asked to give the following brief particulars for the information of members :—

(A) Address ; (B) Date of birth ; (C) Degrees, affixes, prizes, publications and distinctions ; (D) Type of experience, *e.g.* official or private practice ; (E) Type of practice, *e.g.* churches, schools, housing, industrial, etc. ; (F) Previous service on R.I.B.A. Council and Committees, the Architectural Association or an Allied Society ; (G) Military or any other form of national service.

The following candidates have been nominated :—

AS MEMBERS OF COUNCIL

Anderson : Alexander Frederick Berenbruck. Nominated by the Council under Bye-law 34. (A) 13 Manchester Square, London, W.1 ; (B) 22 July 1888. (C) F.R.I.B.A. ; S.A.D.G. Diploma of Ecole des Beaux Arts, Paris ; (D) Private Practice ; (E) In partnership with Robert Atkinson [*F.*] since 1924 ; (F) President Architectural Association 1943-45, Member of R.I.B.A. Council 1943-45. Member of Public Relations and Demobilisation Committees ; (G) Served in Army 1914-19 ; Home Guard 1940-45.

Aslin : Charles Herbert. Nominated by F. G. Allen, Oliver Carey, W. A. Henderson, D. L. Medd, H. L. Moody, G. Newell, G. Revitt, *Associates*. (A) County Architect, County Hall, Hertford ; (B) 15 December 1893 ; (C) F.R.I.B.A., M.I.Struct.E. ; (D) Official Architect since 1919, Sheffield, Rotherham County Borough, Derby County Borough, Hampshire and Hertfordshire County Councils ; (E) Every form of Local Government Building ; (F) Member of R.I.B.A. Official Architects' Committee since inception, now Chairman, served on A.R.C.U.K. ; Past President Notts., Derby and Lincoln Architectural Society ; (G) Served in Army 1914-19, Civil Defence 1939-45.

Bain : Victor. Nominated by the Council under Bye-law 34. (A) 3 Queen Square, Leeds, 2 ; (B) 13 June 1887 ; (C) F.R.I.B.A. ; Publications on National Planning ; (D) Private Practice ; (E) Banks, Schools, various Industrial Works, Garages, Offices, Swimming Baths ; (F) R.I.B.A. Council 1935-37—1939-46, Allied Societies Conference 1934-36, Science Standing Committee 1935-40 (Chairman 1939-40), Town Planning Committee 1935-38, Practice Committee 1944-46, West Yorkshire Society of Architects, Member of Council 1922-46, President 1934-36 ; (G) Served in Army 1914-17.

Barber : Frederick. Nominated by R. Kitching Ellison, Horace C. Fread, T. Gordon Jackson, John Swarbrick, *Fellows*; W. M. Carter, Frank C. Otton, Chas. A. Trimm, Leo Cyril Varcoe, *Associates*; Reginald F. Alner, H. Norman Haines, Norman B. W. Irwin, *Licentiates*. (A) 3 The Apple Market, Kingston-upon-Thames; (B) 6 August 1895; (C) F.R.I.B.A., M.B.E.; (D) Private and Official; (E) Domestic, Industrial, Local Government, Exhibition work; Interior decoration (including ships); (F) Committee member Kingston Group South-Eastern Society of Architects; (G) Group Liaison Officer London Civil Defence Region, member of Central Progress Committee, M.O.W. (W.D. Repairs).

Bunch : Arthur Charles. Nominated by the Council under Bye-law 34. (A) 23 Binswood Avenue, Leamington Spa ; (B) 10 March 1879 ; (C) F.R.I.B.A. ; (D) Official and Private Practice ; (E) Schools, Housing, Hospitals, and Public Buildings ; (F) R.I.B.A. Council 1938-46, Vice-President 1940-44, Member of Executive, Finance and House, Official Architects, Professional Conduct, and School Construction Committees ; Member of Architects' Registration Council, Member of Council, Birmingham and Five Counties Architectural Association and of Coventry Society of Architects ; (G) Warwickshire County Civil Defence Headquarters Staff.

Cartwright : Thomas Nelson. Nominated by the Council under Bye-law 34. (A) 6 Clarendon Street, Nottingham ; (B) 16 May 1905 ; (C) F.R.I.B.A., D.S.C. and two Bars ; (D) Private Practice, Senior Partner Bromley, Cartwright & Waumsley ; (E) Commercial and Industrial, including Factories, Banks, Stores, Offices, Hospitals, etc. ; (F) Nottingham, Derby and Lincoln Architectural Society Council 1931-33 and 1937-39 ; (G) Six years in the R.N.V.R., four of these as Senior Officer of a M.T.B. Flotilla in the Channel, D.S.C. and two Bars, Mentioned in Despatches.

Chitty : Anthony Merlott. Nominated by Gordon Stephenson, *Fellow* ; Hugh Casson, Miss Patience Clifford, Mrs. Susan Cox, D. H. Crompton, Jr., John Lacey, Peter Shepheard, *Associates*. (A) 20 Gower Street, London, W.C.1 ; (B) 10 December 1907 ; (C) F.R.I.B.A., M.A., A.A.Dipl., A.M.T.P.I. ; (D) Private Practice formerly in Tecton, now partner in Hening and Chitty, Town Planning Consultants ; Foundation Member of M.A.R.S. Group ; (E) Municipal Housing, Schools and Agricultural Buildings ; (F) Architectural Science Board, Public Relations Committee, etc. (G) 1940-42 Assistant Director of Factories at M.A.P., 1942-44 Technical Officer to the Burt Committee on House Construction.

Dudding : John Walter Mackenzie. Nominated by Frank A. Broadhead, H. Hardwick Dawson, Alfred J. Thraves, *Fellows*; D. R. Cresswell, Philip Gerrard, A. Chave Jones, Miss H. Margaret Littlefair, *Associates*. (A) 25 Newcastle Drive, The Park, Nottingham; (B) 1898; (C) F.R.I.B.A.; (D) Mainly official—some Private Practice; (E) Industrial, Public Service, Welfare, Recreational and Domestic; former Lecturer in T. & C. P. to Department of Adult Education, University College, Nottingham; some Editorial and Journalistic experience; (F) R.I.B.A. Exhibition Sub-Committee, Member of Council, Nottingham, Derby and Lincoln Architectural Society; Past Vice-Chairman Association Section, Edinburgh A.A.; worked on R.I.B.A. National Plan; (G) 1916-19 Royal Artillery, 1940-45 L.D.V. and Home Guard.

Edwards : John Ralph. Nominated by the Council under Bye-law 34. (A) 7 Unity Street, College Green, Bristol 1 ; (B) 7 September 1891 ; (C) F.R.I.B.A., A.R.W.A., F.S.A. ; (D) Private Practice ; also Deputy Commissioner, South-West Region, War Damage Commission ; (E) Churches, Schools, Offices, Industrial, Historic Buildings and Domestic Work ; (F) President, Wessex Society of Architects, and Representative on R.I.B.A. Council since 1941 ; President, Bristol Society of Architects 1936-43, Member of R.I.B.A. Practice Committee since 1944, Chairman of Council of R.W.A. School of Architecture 1936-44, Lecturer in Applied Construction R.W.A. School of Architecture 1930-33 ; (G) Served in Army 1914-18 (Captain R.A.) ; twice Mentioned in Despatches.

Henson : Arthur Edward. Nominated by Sir John Brown, T. S. Darbyshire, John Murray Easton, Joseph Hill, Howard Robertson, Thos. S. Tait, *Fellows* ; Mordecai Pearlman, Edmund Ward, *Associates*. (A) 117 Sloane Street, London, S.W.1 ; (B) 10 March 1899 ; (C) F.R.I.B.A., A.I.Struct.E., Lieut.-Colonel R.E. ; (D) Private Practice ; (E) Municipal Buildings, Hospitals, Housing, Cinemas, Industrial, Schools ; (F) Several years Member of Council Northants, Beds., and Hunts. Association of Architects ; (G) 1917-19 Artists' Rifles and Gordons, 1939-45 Northants Yeomanry and Royal Engineers.

Howitt : Leonard Cecil. Nominated by G. Noel Hill, R. A. Cordingley, Johnson Blackett, Hubert Bennett, Professor Lionel B. Budden, John Hughes, Francis Jones, *Fellows*. (A) Acting City Architect, Town Hall, Manchester 2 ; (B) 23 November 1896 ; (C) F.R.I.B.A., B.Arch. (Liverpool), Diploma in Town and Country Planning (Manchester), Diploma in Public Administration (Liverpool), Associate Member, Town Planning Institute ; (D) Official Architecture 16 years, Private Practice 11 years ; (E) All types of Local Government buildings, schools and housing ; Administration of Bye-laws and Town Planning, Banks, Commercial Buildings, Industrial Buildings ; (F) Fellow of Manchester Society of Architects and ex-Member of Council and various Committees, Fellow of Liverpool Architectural Society and ex-Member of Council and various Committees ; (G) Served in Army 1915-20 and 1942-45 Major W.O. Staff).

Howitt : Thomas Cecil. Nominated by the Council under Bye-law 34. (A) St. Andrew's House, Nottingham ; (B) 6 June 1889 ; (C) F.R.I.B.A., D.S.O., Chev. Legion d'Honneur, R.I.B.A. Bronze Medal 1933 and 1936, Nottingham, Derby and Lincoln Area ; (D) Private Practice, six years official ; (E) Civic Buildings, Industrial, Housing, Banks, Churches, Cinemas ; (F) First elected R.I.B.A. Council 1928 ; Executive, Practice, Competitions, and New Towns Committees ; President, Nottingham, Derby and Lincoln Architectural Society 1931-33 ; (G) Served in Army 1914-18 (Lieut.-Colonel) ; 1939-46 various Ministry of Works Committees, Deputy Commissioner War Damage, Region No. 3

Jackson : Herbert. Nominated by the Council under Bye-law 34. (A) 65 New Street, Birmingham ; (B) June 1909 ; (C) F.R.I.B.A., Recognised Schools Bronze Medal 1928, Henry Saxon Snell Prize 1930 ; (D) Private Practice since 1931 ; (E) Schools, Industrial, Civic Buildings, Housing ; (F) R.I.B.A. Practice Committee ; Vice-President, Birmingham and Five Counties Architectural Association.

Lobb : Howard Leslie Vicars. Nominated by L. H. Bucknell, Anthony M. Chitty, C. Lovett Gill, Howard Robertson, T. S. Tait, *Fellows*; Henry Braddock, Charles Woodward, *Associates*. (A) 20 Gower Street, London, W.C.1; 19 The Butts, Brentford, Middlesex; (B) 9 March 1908; (C) F.R.I.B.A.; (D) Private Practice; (E) Industrial Schools, Aerodromes, Housing, etc.; (F) Chairman R.I.B.A. Exhibitions Sub-Committee, Member of Public Relations Committee, Chairman of Codes of Practice Committee "F"; R.I.B.A. Representative on British Standards.

Milburn : Stanley Wayman. Nominated by the Council under Bye-law 34. (A) 17 Fawcett Street, Sunderland ; (B) 28 June 1887 ; (C) F.R.I.B.A., M.B.E., M.C., T.D. ; (D) Private Practice ; (E) Schools, Exhibitions, Hospitals, Housing, Theatres, Factories and other Industrial Buildings ; (F) Member R.I.B.A. Council 1939, 1945-46, Competitions Committee 1945-46, Served on Council Northern Architectural Association ; Vice-President, President, 1939-46 ; (G) Ten years' active service in the Royal Artillery in the 1914 and 1939 wars.

Nash : Vivian Leslie. Nominated by Andrew Boyd, D. E. E. Gibson, Birkin Haward, R. D. Manning, Colin Penn, Brian S. Roberts, *Associates* ; H. J. Everett Pyne, *Licentiate*. (A) 16 Kingscliffe Gardens. S.W.19 ; (B) 31 August 1901 ; (C) F.R.I.B.A. ; (D) Private Practice ; (E) Housing, Industrial and Commercial ; (F) Previous service on R.I.B.A. Council (A.B.T. Representative), also on various R.I.B.A. Committees.

Nicholson : Christopher David George. Nominated by Gordon Stephenson, *Fellow* ; Hugh Casson, Miss Patience L. Clifford, Mrs. Susan Cox, David H. Crompton Jr., Peter Shepheard, H. Myles Wright, *Associates*. (A) 110 Old Brompton Road, S.W.7 ; (B) 1904 ; (C) F.R.I.B.A., M.A. (Cantab.), Davison Scholar, Princeton University, U.S.A., Member of M.A.R.S. Group ; (D) Private Practice ; (E) Principally Domestic ; (G) 1939-45 served in the Fleet Air Arm.

Nunn: John Price. Nominated by C. Gustave Agate, R. A. Cordingley, F. Leslie Halliday, Francis Jones, J. E. Marshall, *Fellows*; C. W. Quysner, R. B. Turner, *Associates*. (A) 180 Oxford Road, Manchester 13; (B) 5 May 1897; (C) F.R.I.B.A., B.A. Manchester, 1st Class Hons. Arch-Dipl.T.P. Manchester, A.M.T.P.I., A.I.Struct.E., Senior Lecturer in Architecture and Master of Design Manchester University School of Architecture; (D) Private Practice; (E) Schools, Housing, Industrial; (F) R.I.B.A. Public Relations Sub-Committee, Hon. Secretary Manchester Society of Architects; (G) 1914-18 served with the Royal Artillery.

Seward : Henry Thomas. Nominated by the Council under Bye-law 34. (A) 16 Princess Street, Manchester ; (B) 6 July 1893 ; (C) F.R.I.B.A. ; (D) Private Practice ; (E) Industrial, Housing, Schools and General Practice ; (F) R.I.B.A. Council 1941-45 ; Reconstruction Committee 1941-43, Practice Committee 1944-46, President of Manchester Society of Architects 1941-45, Member of Architects' Registration Council 1946, Chairman, Manchester and Salford Architects' and Builders' Joint Consultative Board 1941-46.

Shepherd : John Chiene. Nominated by the Council under Bye-law 34. (A) The Pond House, Stoke Row, Henley-on-Thames ; (B) 10 October 1896 ; (C) F.R.I.B.A., A.A. Diploma, R.I.B.A. Henry Jarvis Student at A.A. 1922 ; Tite Prizeman; (D) Private Practice ; (E) General Practice ; (F) R.I.B.A. Prizes, Exhibitions and Competitions Committees ; Architectural Association Council ; (G) 1914-19 Royal Artillery, 1939-45 Royal Engineers.

Squire : Raglan Hugh Anstruther. Nominated by the Council under Bye-law 34. (A) 81 Piccadilly, London, W.1 ; (B) 30 January 1912 ; (C) F.R.I.B.A. ; (D) Private Practice for last ten years ; previous to 1939-45 war in own name, then as Raglan Squire & Rodney Thomas, and recently as partner in Arcon ; (E) General Practice ; Prefabricated Housing ; (F) Secretary to the Architecture Club 1935-40, Secretary to R.I.B.A. Reconstruction Committee from its inception to joining H.M. Forces ; (G) Royal Engineers 1941-45.

Steele : Frank Reginald. Nominated by F. W. Beech, J. Challice, H. V. Hague, *Fellows* ; A. G. Barber, J. H. Barker, J. Catchpole, A. Cunes, Robert F. Fairhurst, Eric Hartland, W. J. Jobson, W. Lambert Lee, E. V. Pack, H. W. M. Sage, S. J. Stone, *Associates*. (A) County Architect, County Hall, Chichester, Sussex ; (B) 6 July 1905 ; (C) F.R.I.B.A., F.S.I., M.T.P.I., R.I.B.A. Distinction Town Planning ; (D) 16 years' official experience in Wolverhampton, Huddersfield, Bristol and Exeter ; recently City Architect, Exeter ; present position, County Architect West Sussex ; (E) Schools, Housing, Health and Public Buildings ; (F) Member of Council Devon and Cornwall Architectural Society ; (G) Civil Defence.

Stephenson : Gordon. Nominated by the Council under Bye-law 34. (A) 166 Kew Road, Richmond, Surrey ; (B) 6 June 1908 ; (C) F.R.I.B.A., B.Arch.(Hons.) Liverpool, Master in City Planning (Mass.Inst.Tech., U.S.A.), A.M.T.P.I., etc., etc. ; (D) Official and Private Practice ; (E) Ministry of Town and Country Planning ; (F) Member of several R.I.B.A. Committees, Member of Council A.A. ; (G) Divisional Architect Royal Ordnance Factory and Hostels for War Workers ; temporary service with Ministry of Town and Country Planning.

Stillman : Cecil George. Nominated by the Council under Bye-law 34. (A) County Architect, Middlesex House, 20 Vauxhall Bridge Road, London, S.W.1 ; (B) 6 April 1894 ; (C) F.R.I.B.A., M.M. ; numerous Articles and Papers on School Architecture and on Public Work generally ; (D) County Architeet, Middlesex County Council ; previously County Architect West Sussex and East Suffolk ; Deputy County Architect Cheshire and Hampshire ; Chairman Elect, County Architects' Society ; Member of various Government Committees ; (E) Official work ; (F) Member of R.I.B.A. Council and R.I.B.A. Executive Committee since 1939 ; also served on Reconstruction Committee, Registration Council and Housing Committee, and Architectural Science Board ; Vice-Chairman of Architectural Science Board ; Chairman of School Design and Construction Committee and Committee for Negotiating Salaries ; Vice-Chairman of Official Architects' Committee ; (G) Served in Royal Engineers 1914-18, awarded M.M. and Mentioned in Despatches ; Home Guard 1940.

Stokes : David Dominic Scott. Nominated by D. F. Martin Smith, *Fellow* ; John D. Broadbent, R. Gordon Brown, Hugh P. Crallan, Cecil C. Handisyde, Denzil Nield, Michael Pattrick, *Associates*. (A) 32 Victoria Street, London, S.W.1 ; (B) 21 November 1908 ; (C) F.R.I.B.A. ; (D) Private Practice ; (E) General Practice : Shops, Houses and Flats, some Housing, also work on existing Churches, Schools, Offices, etc. ; (F) Nil; (G) Served six years in K.R.R.s.

Swarbrick : John. Nominated by the Council under Bye-law 34. (A) 3 North, King's Bench Walk, Temple, London, E.C.4 ; (B) 22 March 1879 ; (C) F.R.I.B.A., F.S.A., M.Inst.Struct.E., A.A. Silver Medallist 1903, R.A. Silver Medallist 1904, Publications on Robert Adam, Easement of Lights, etc. ; Editor "National Ancient Monuments Review" ; (D) Private and official ; (E) Churches, Schools, Domestic and Business Premises ; (F) R.I.B.A. Council 1939 to date, R.I.B.A. Science and Practice Committees, Joint Committee on Law of Ancient Lights, School Design Committee, Professional Text and Reference Books Committee ; Hon. Secretary of Manchester Society of Architects for eleven years ; (G) Emergency Works Officer (M.O.W.) for Cumberland, Westmorland, N. and Central Lancs. ; Chief Technical Officer, Board of Trade (N. Region), Codes of Practice Officer, Department of S. and I. Research.

Thomas : Mark Hartland. Nominated by the Council under Bye-law 34. (A) 46 Sheffield Terrace, London, W.8 ; (B) 8 October 1905 ; (C) F.R.I.B.A., M.A. (Cantab.) ; (D) Private Practice to 1940 ; since 1940 official appointment ; (E) Official appointment ; Industrial and Commercial ; (F) Council of Wessex Society of Architects, R.I.B.A. Reconstruction Committee, Architectural Science Board and Foreign Relations Committee.

Townsend: Miss Joyce Eleanor. Nominated by John Murray Easton, Mrs. Gillian Harrison, Oliver Law, S. Rowland Pierce, Howard M. Robertson, *Fellows*; Miss E. Drury, R.D.Hunt, *Associates*; Eric G. V. Hives, *Licentiate*. (A) Naunton, Nr. Cheltenham, Glos.; (B) 27 August 1900; (C) F.R.I.B.A., A.A. Dipl.; (D) Private Practice and Official; (E) Housing, Reconstruction, Flats, Industrial, Commercial, Hotels, Laboratories, etc.; (F) R.I.B.A. Slum Clearance and Town Planning Committee and sub-Committee, Chairman R.I.B.A. Women Members' Committee, member of Council of Wessex Society of Architects, and the Gloucestershire A.A.; (G) 1940-46 under M.A.P. Directorate.

AS ASSOCIATE MEMBERS OF COUNCIL

Cadbury-Brown : Henry Thomas. Nominated by the Council under Bye-law 34. (A) 17 Clarges Street, Piccadilly, London,

W.1 ; (B) 20 May 1913 ; (C) A.R.I.B.A., A.A.Dip. ; (D) Private Practice ; (E) Commercial and Domestic ; (F) Chairman, Exhibitions Sub-Committee "The Small House" ; (G) Served in Royal Artillery 1939-45.

Campbell : Kenneth John. Nominated by the Council under Bye-law 34. (A) 88 Parkway, Welwyn Garden City, Herts.; (B) 26 September 1909 ; (C) A.R.I.B.A., President, Association of Building Technicians ; (D) ten years assistant in Private Practice, ten years in official Practice ; (E) Hospitals, Domestic, Welfare Buildings, Pithead Baths, Rehabilitation Centres ; (F) Member of the Public Relations Committee ; (G) A.R.P. Engineer in the City of London.

Castle : James Thomas. Nominated by C. D. Andrews, H. W. Burchett, L. Maurice Evans, C. G. Stillman, *Fellows* ; C. T. Ayerst, J. H. Davidson, *Associates* ; Harold Baker, *Licentiate*. (A) Town Hall, Bradford ; (B) 24 February 1903 ; (C) A.R.I.B.A., A.M.T.P.I., Ashpitel Prizeman 1928 ; (D) Official City Architect, Bradford, formerly County Architect E. Riding of Yorkshire ; (E) Housing, Schools, Hospitals, Institutions ; (F) Member of Council West Yorkshire Society of Architects, Chairman of Bradford Branch ; (G) Civil Defence Organisation of Bradford.

Fisk: Walter William. Nominated by Thos. E. Scott, *Fellow*; Francis E. Green, P. N. Negus, H. L. Pitt, W. J. Smith, A. J. Woodhead, *Associates*; S. F. Burley, *Licentiate*. (A) 52 Gwalior House, Chase Road, Southgate, N.14; (B) 12 December 1910; (C) A.R.I.B.A., A.A. Dipl., R.I.B.A. Henry Jarvis Student at A.A. 1932, A.A. Henry Florence Student 1933; (D) Private Practice and Teaching; (E) Hospitals, Public Buildings and Institutions, Flats and Offices, Industrial and Housing; (F) nil ; (G) Lieutenant R.E., 1942-45.

Gleave : Joseph Lea. Nominated by the Council under Bye-law 34. (A) School of Architecture, Edinburgh College of Art ; (B) 5 August 1907 ; (C) M.A., A.R.I.B.A., M.T.P.I. ; President Society of Scottish Artists ; (D) Head of Edinburgh School of Architecture and Private Practice ; (E) Columbus Memorial, Housing, etc. ; (F) Member of R.I.B.A. Board of Architectural Education and on Schools Sub-Committee ; (G) Served in Royal Artillery 1939-44 (Lieut.-Colonel from 1942).

Greaves : George Lee. Nominated by John Hughes, H. T. Seward, *Fellows* ; G. Grenfell Baines, Harold Goldstraw, E. F. Massey, *Associates* ; Geo. H. Broadbent, F. G. Yorath, *Licentiates*. (A) 33 Albion Street, Hanley, Stoke-on-Trent ; (B) 14 September 1909 ; (C) A.R.I.B.A., Member of Stoke-on-Trent City Council, part author N. Staffs. Planning Report, etc., etc. ; (D) Private Practice, during war M.O.W. Consultant on Experimental Building ; (E) General Provincial Practice, specialising in Licensed work and Industrial ; (F) R.I.B.A. Representative on B.I.N.C. since 1940, Hon. Secretary N. Staffs. Council of Building Industry ; services with Manchester Society of Architects and N. Staffs. A.A. ; (G) Police Service.

Harrison : John. Nominated by W. H. Beattie, E. R. Bill, C. W. Coster, W. A. Larché Hopkins, G. E. Horsfall, G. G. Roberts, R. J. Watson, D. J. Williams, *Associates* ; S. P. Atkin, *Licentiate*. (A) The County Hall, Kingston-on-Thames ; (B) 29 May 1896 ; (C) A.R.I.B.A. ; (D) Official and Private ; (E) Schools, Hospitals, Housing, Theatres and Commercial ; (F) R.I.B.A. School Design and Construction Committee, Member of Council Nottingham, Derby and Lincoln Architectural Society ; (G) Served in Army 1914-18.

Haward : Birkin. Nominated by F. R. S. Yorke, *Fellow* ; Andrew Boyd, Miss Jean Hounsell, R. D. Manning, Colin Penn, Brian S. Roberts, *Associates* ; H. J. Everett Pyne, *Licentiate*. (A) "Normanhurst," 44 Tuddenham Road, Ipswich ; (B) 7 October 1912 ; (C) A.R.I.B.A., Ashpitel Prizeman 1933 ; (D) Private Offices ; two years National Organiser A.B.T. ; (E) Schools, Hospitals, Industrial and general Domestic Practice ; (G) Lieutenant in Assault R.E.s.

Holford : Professor William Graham. Nominated by the Council under Bye-law 34. (A) 80 Bedford Street, Liverpool, and 1 Bank Buildings, Princes Street, London, E.C.2. (B) 22 March 1907 ; (C) A.R.I.B.A., M.A., M.T.P.I., Rome Scholar in Architecture 1930, Henry L. Florence Bursar 1935 ; various Publications on History and Town Planning and particularly on Industrial Planning and Baroque Architecture ; (D) Teacher and Lecturer and Private Practice ; for some time an officer of the Ministries of Supply, Works and Town and Country Planning ; (E) Housing and Industrial ; (F) Associate Member of R.I.B.A. Council for eight years, one time Executive Committee, Library Committee, etc. ; (G) War work on Ordnance Factories, etc.

Johnson-Marshall : Percy Edwin Allen. Nominated by Roger Dobson, Brian Hackett, N. W. Lee, Robert W. Paterson, Peter Shepheard, W. E. Tatton Brown, R. le R. White, *Associates*. [illegible] City Architect's Department, Coventry ; (B) 21 January 191[illegible] ; (C) A.R.I.B.A., Dipl.Arch. (Distinction) Liverpool, Certificate [illegible] Civic Design, Liverpool ; (D) Senior Assistant Architect in charge of City Planning, City Architect's Department, Coventry ; (F) Organising Secretary, Coventry Branch A.B.T. ; (G) Major R.E. ; Founder and General Secretary of S.A.T.O. (Service Aids and Technical Organisation) in India and S.E. Asia ; Secretary of Committee which prepared a syllabus for an Indian School of Architecture and Regional Planning for Calcutta University (now under consideration by the All-India Council for Technical Education ; Joint Organiser with W. Tatton Brown of All Burma all services Polytechnic, Rangoon ; Author of Memorandum on Proposed Facilities of Planning Design and Technics put up to the All-India Council of Technical Education by the Adviser on Education to the Government of India ; Author of Introduction to Planning ; Joint Planning Adviser to National Planning Association of Burma and author of Planning Reports for the National Plan prepared for the Government of Burma (with W. Tatton Brown).

Johnson-Marshall : Stirrat Andrew William. Nominated by C. H. Aslin, *Fellow* ; F. G. Allen, Oliver Carey, W. A. Henderson, D. L. Medd, H. L. Moody, G. Newell, *Associates*. (A) County Architect's Department, County Hall, Hertford ; (B) 19 February 1912 ; (C) A.R.I.B.A., B.Arch. (1st Hons.) Liverpool, Certificate in Town Planning (Distinction) ; (D) Deputy County Architect, Hertfordshire, formerly Deputy County Architect Isle of Ely C.C. ; (E) Local Government ; (F) Nil ; (G) Served with R.E.s 1939-42, later Design and Development of Army Deception Equipment.

Ling : Arthur George. Nominated by the Council under Bye-law 34. (A) 14 St. Peter's Square, Hammersmith, London, W.6 ; (B) 20 September 1913 ; (C) A.R.I.B.A., B.A.(Arch.) Hons., A.M.P.T.I., R.I.B.A. Silver Medal 1936 (Essay), Hunt Bursary 1939, Bartlett Exhibitioner, contributor to Technical Journals and Publications ; (D) Official with London County Council, City Corporation and in offices of private practitioners ; at present Senior Planning Officer, L.C.C. Architects' Department ; (E) Town Planning, Housing, Schools, Commercial Premises ; (F) R.I.B.A. Town and Country Planning Committee 1944-46.

Mathews : Edmund Douglass Jefferiss. Nominated by the Council under Bye-law 34. (A) 3 Ebury Street, London, S.W.1 ; (B) 10 July 1907 ; (C) A.R.I.B.A., O.B.E., P.A.S.I. ; (D) Private Practice ; (E) General, with specialist knowledge of Hospitals, Hostels, Industrial Buildings and Church Restoration ; (F) R.I.B.A. Public Relations Committee 1945-46 ; Chairman, Press Contacts Sub-Committee 1945-46, Member of Architects' Registration Council and Professional Purposes Committee ; Member of Committee of Croydon Chapter, S.E. Society of Architects ; (G) Served in Royal Engineers 1935-45 (Lieut.-Colonel and Assistant Director of Works).

Oakes : Colin St. Clair Rycroft. Nominated by the Council under Bye-law 34. (A) Burmans, Ripe, Sussex; (B) 23 May 1908 ; (C) A.R.I.B.A., M.B.E., T.D., Rome Scholar in Architecture 1931, Arthur Cates Prizeman 1934 ; (D) Deputy Chief Architect, Bengal Government 1936-38, Deputy Assistant Director of Works, War Office, 1938-39 ; at present in Partnership Practice ; (E) Housing, Office Buildings, Schools, Public Buildings, Stores Buildings and Warehouses ; (F) On A.A. Staff ; (G) Served in Army 1939-45, Staff Captain R.A., Brigade-Major and A.Q.M.G., awarded M.B.E., T.D., and twice Mentioned in Despatches.

Otton: Frank Charles. Nominated by Frederick Barber, R. Kitching Ellison, Horace C. Fread, T. Gordon Jackson, John Swarbrick, *Fellows*; W. M. Carter, Chas. A. Trimm, Leo Cyril Varcoe, *Associates*; Reginald F. Alner, Norman B. W. Irwin, *Licentiates*. (A) Municipal Offices, New Malden, Surrey; (B) 12 August 1907; (C) A.R.I.B.A., P.A.S.I.; (D) Official; (E) Local Government; (F) Member of Committee Kingston Group, Guildford Chapter, South-Eastern Society of Architects; (G) War Damage Officer, Malden and Coombe.

Stedman : Leonard Rowland. Nominated by G. Maxwell Aylwin, Robert F. Bargman, Cecil Burns, John L. Denman, H. R. Gardner, Arthur J. Stedman, *Fellows* ; L. James Hobson, *Associate*. (A) 36 South Street, Farnham, Surrey ; (B) 2 September 1899 ; (C) A.R.I.B.A. ; (D) Official and Private Practice ; (E) Domestic, Ecclesiastical, Industrial, Scholastic, etc. ; (F) Hon. Treasurer S.E. Society of Architects, Guildford Chapter ; (G) Commissioned Service in Army 1918-19, 1940-45.

Tatton Brown : William Eden. Nominated by the Council under Bye-law 34. (A) 57 Lansdowne Road, London, W.11 ; (B) 18 October 1910 ; (C) A.R.I.B.A., M.A., A.A.Dip., Winner of R.I.B.A. Competition for Week-end House 1935 ; numerous articles in *Architectural Review, Journal, Autocar, Design for To-day*, etc. ; (D) Private and Official ; (E) Housing, Flats, Interiors ; (F) Nil ; (G) Served in Royal Engineers 1941-45, Staff Officer R.E. Grade II (Major).

Urech : Reginald Harold. Nominated by John Murray Easton, Charles Holden, A. H. Moberly, Brian O'Rorke, S. Rowland Pierce, J. Alan Slater, *Fellows* ; Charles Pike, *Associate*. (A) 29 Tower Street, London, W.C.1 ; (B) 5 March 1906 ; (C) R.I.B.A., R.I.B.A. London Architecture Medal 1935 ; (D) Private Practice ; (E) Town Halls, Hospitals and Commercial Buildings ; (F) R.I.B.A. Art Standing Committee ; (G) Four years' commissioned service with Royal Engineers.

Walker : Winston. Nominated by A. H. Antrum, W. W. Atkinson, C. P. Dickinson, Miss M. E. Lloyd, I. D. F. Picken, J. A. C. Platts, N. F. Sanders, *Associates*. (A) 143 Old Church Street, Chelsea, S.W.3 ; (B) 9 August 1912 ; (C) A.R.I.B.A., A.A.Dipl., A.R.Ae.S., West Riding County Architectural Scholarship 1932 ; (D) Official and Private Practice ; (E) Churches, Hotels, Flats, Aerodromes ; (F) Nil ; (G) Camouflage and Aerodrome Planning Expert in Air Ministry 1938-42 ; Commission in R.E.s 1942-45.

AS LICENTIATE MEMBERS OF COUNCIL

Chapman : William Dobson. Nominated by the Council under Bye-law 34. (A) Butley Hall Green, Prestbury, Macclesfield, Cheshire ; (B) 16 February 1908 ; (C) L.R.I.B.A., M.T.P.I., F.I.L.A., Past President Town Planning Institute ; numerous contributions to the Press and various publications on divers aspects of Planning ; (D) Private Practice and Lecturer in Planning Practice, Victoria University, Manchester School of Architecture, External Examiner in Town and Country Planning—University of Durham School of Architecture ; (E) Town and Country Planning, Civic Design and Estate Planning, Housing and Industrial Architecture ; (F) Member R.I.B.A. Town and Country Planning Committee and Board of Architectural Education, Town Planning Education Sub-Committee ; Member of Panel of Examiners for R.I.B.A., Distinction in Town Planning ; (G) Hon. Architect on Emergency Civil Defence Works and Liaison Officer on Location of Government Building Activities—County of Cheshire.

Haines : Harry Norman. Nominated by Frederick Barber, R. Kitching Ellison, Horace C. Fread, T. Gordon Jackson, John Swarbrick, *Fellows*; W. M. Carter, Frank C. Otton, Chas. A. Trimm, Leo Cyril Varcoe, *Associates*; Reginald F. Alner, Norman B. W. Irwin, *Licentiates*. (A) 1 & 2 Gray's Inn Place, Gray's Inn, W.C.1; (B) 7 September 1908; (C) L.R.I.B.A.; (D) formerly Asst. Architect New Scotland Yard—now private practice in partnership with Gordon Jackson and partners; (E) General—including Housing, Schools, Factories, etc., also Police Buildings and Courts; (F) Chairman Kingston Group and member of Guildford Chapter South-Eastern Society of Architects; (G) Technical Representative of Commissioner of Metropolitan Police on matters affecting Lighting Restrictions Order.

Morris : Gwyn Henry. Nominated by A. C. Bunch, T. Cecil Howitt, Cyril F. Martin, *Fellows* ; D. E. E. Gibson, P. Johnson-Marshall, J. T. Mallorie, Rodney Thomas, *Associates*. (A) City of Coventry Architectural Department, 1A Warwick Row, Coventry ; (B) 27 October 1907 ; (C) L.R.I.B.A. ; (D) Official ; (E) Chief Assistant Architect, Housing ; (F) Member of Executive and other Committees, Coventry Chapter, Birmingham and Five Counties Architectural Association, Member of Executive and General Council of A.B.T. ; (G) Royal Observer Corps four years, part time.

Nicholls : Guy Herbert. Nominated by the Council under Bye-law 34. (A) 66A Wigmore Street, London, W.1 ; (B) 17 August 1904 ; (C) L.R.I.B.A., F.I.A.A. ; (D) Private Practice to 1939 ; now in partnership with W. Rowley Hall [*A.*] ; (E) Housing Estates, Flats, Garages ; (G) Served in Royal Engineers 1939-45 (Lieut.-Colonel).

Parkes : Clarence Bertram. Nominated by the Council under Bye-law 34. (A) Chief Architect, Bourneville Village Trust, Estate Office, Bourneville, Birmingham ; (B) 8 July 1895 ; (C) L.R.I.B.A., Articles in R.I.B.A. JOURNAL and Technical Press on Housing and Town Planning ; Research Work for Literary contributions ; (D) Architect to Housing Trust ; (E) General Practice, Housing, Town Planning Research for West Midland Group since 1941 ; (F) R.I.B.A. Council 1939 to date, R.I.B.A. Town Planning, Housing and Slum Clearance Committee 1940, Birmingham and Five Counties Architectural Association Council pre-war and at present ; (G) Served in Army 1916-18 and part-time Warden 1938-45.

Pyne : Henry John Everett. Nominated by Andrew Boyd, Birkin Haward, R. D. Manning, Colin Penn, Geo. S. Pester, Brian S. Roberts, G. M. Toplis, *Associates*. (A) Chelwood, Grinstead Lane, North Lancing, Sussex ; (B) 6 August 1906 ; (C) L.R.I.B.A. ; (D) Public Office, Middlesex County Council ; (E) Schools ; (G) Six years in Armed Forces.

Wakeford : Frederick Charles. Nominated by the Council under Bye-law 34. (A) 24 Holland Way, Hayes, Bromley, Kent ; (B) 14 March 1890 ; (C) L.R.I.B.A. ; (D) Local Government and Government service ; (E) Housing, Churches, Hospitals, etc. ; (F) R.I.B.A. Salaried Members' Committee 1934 to date ; Hon. Secretary of Committee since 1937 ; Member of the Architects' Registration Council and of R.I.B.A. Joint Standing Committee on negotiations in connection with salaries ; (G) Served in B.E.F. 1914-16, discharged disabled.

ATTENDANCES AT COUNCIL MEETINGS
(Session 1945-46)

(UNLESS OTHERWISE STATED THE MEMBER'S ADDRESSES ARE IN LONDON)
(9 Meetings)

President: Sir Percy E. Thomas (Cardiff), 9.

Vice-Presidents: J. Murray Easton 7; T. C. Howitt (Nottingham), 9; L. H. Keay (Liverpool), 6; A. L. Roberts (Winchester), 9.

Honorary Secretary: Michael Waterhouse, 8.

Honorary Treasurer: J. L. Denman (Brighton), 8.

Members of Council: Professor Sir Patrick Abercrombie, 0; Victor Bain (Leeds), 8; Percy J. Bartlett (Nottingham), 6; A. C. Bunch (Warwick), 7; J. Murray Easton, 7; J. H. Forshaw, 3; Frederick Gibberd, 6; T. Cecil Howitt (Nottingham), 9; L. H. Keay (Liverpool), 6; A. W. Kenyon, 8; J. Nelson Meredith (Bristol), 3; Professor Sir Charles Reilly, 6; Howard M. Robertson, 7; Herbert J. Rowse (Liverpool), 4; C. G. Stillman, 6; John Swarbrick, 9; J. Hubert Worthington (Manchester), 9; F. R. S. Yorke, 8.

Associate Members of Council: Joseph S. Allen (Leeds), 5; Henry Braddock, 9; D. E. E. Gibson (Coventry), 5; Professor W. G. Holford, 4; R. D. Manning (Exeter), 5; Colin Penn, 9; A. Rankine (Hull), 7; Ralph S. Tubbs, 9; E. Berry Webber, 8.

Licentiate Members of Council: Bernard H. Cox, 8; Charles Oliver (Hull), 9; C. Bertram Parkes (Birmingham), 3.

Past Presidents: W. H. Ansell, 0; H. S. Goodhart-Rendel, 1.

Representatives of Allied Societies in the United Kingdom or Eire: Northern Province of England: S. W. Milburn (Northern Architectural Association), 7; J. S. Beaumont (Manchester Society of Architects), 7; T. M. Alexander (Liverpool Architectural Society), 8; W. E. Biscomb (York and East Yorkshire Architectural Society), 7; R. A. Easdale (West Yorkshire Society of Architects), 6; Stephen Welsh (Sheffield, South Yorkshire and District Society of Architects and Surveyors), 4. *Midland Province of England:* Cyril F. Martin (Birmingham and Five Counties Architectural Association), 9; Frank H. Jones (Leicester and Leicestershire Society of Architects), 7; W. R. Steel (Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects), 8; F. A. Broadhead (Nottingham, Derby and Lincoln Architectural Society), 8; E. J. Symcox (East Anglian Society of Architects), 4. *Southern Province of England:* Philip Tilden (Devon and Cornwall Architectural Society), 6; J. Ralph Edwards (Wessex Society of Architects), 8; *J. T. Saunders 2; and †R.G.Brocklehurst 4; (Berks,Bucks and Oxon Architectural Association); A. E. Geens (Hampshire and Isle of Wight Architectural Association), 4; A. E. Wiseman (Essex, Cambridge and Hertfordshire Society of Architects), 3; Harold Anderson (South-Eastern Society of Architects), 9. *Allied Societies in Scotland:* (Royal Incorporation of Architects in Scotland): A. Graham Henderson (Glasgow), 5; J. R. McKay (Edinburgh) 3; A. G. R. MacKenzie (Aberdeen), 0; A. N. Malcolm (Stirling), 7. *Allied Societies in Wales:* Johnson Blackett (South Wales Institute of Architects), 2. *Allied Societies in Ireland:* Vincent Kelly (Royal Institute of the Architects of Ireland), 0; Frank McArdle (Royal Society of Ulster Architects), 1.

Representatives of Allied Societies in the British Dominions Overseas: Gordon McL. Pitts (Royal Architectural Institute of Canada), 0; L. Sylvester Sullivan (Representative in United Kingdom), 0; Professor Alfred S. Hook (Royal Australian Institute of Architects), 0; W. H. Ansell (Representative in United Kingdom), 0; H. L. Massey (New Zealand Institute of Architects), 0; J. Murray Easton (Representative in United Kingdom), 7; B. St. C. Lightfoot (Institute of South African Architects),

1; E. Berry Webber (Representative in United Kingdom), 8; H. Foster King (Indian Institute of Architects), 0; A. J. A. Illingworth (Representative in United Kingdom), 5.

Representative of the Architectural Association (London): Graham R. Dawbarn, 6.

Representative of the Association of Architects, Surveyors and Technical Assistants (now the Association of Building Technicians): Andrew C. H. Boyd, 8.

Chairman of the Board of Architectural Education: ‡Basil M. Sullivan, 3; §A. B. Knapp-Fisher, 2.

Chairman of the R.I.B.A. Registration Committee: Darcy Braddell, 9.

Chairman of the R.I.B.A. Official Architects' Committee: ¶C. H. Aslin (Hertford), 6.

Representative of the R.I.B.A. Salaried Members' Committee: ¶P. K. Hanton, 8.

* Marked thus resigned, in January, 1946. Possible attendances, 5.

† Marked thus was appointed after the fifth meeting of the Council. Possible attendances, 4.

‡ Marked thus, resigned in December, 1945. Possible attendances, 3.

§ Marked thus was appointed after the seventh meeting of the Council. Possible attendances, 2.

¶ Marked thus were appointed after the first meeting of the Council. Possible attendances, 8.

Review of Periodicals

1945-46—II

PLANNING (generally); HIGH BUILDINGS; UNIT PLANNING

BUILDING, *1946 January, pp. 8-10 :*
Height and density. Analysis by W. Segal of the increased accommodation provided per acre by higher bdgs. : increase above 7 storeys small.

JNL., AMERICAN INSTITUTE OF ARCHITECTS, *1945 December, pp. 276-8 :*
" Freedom from fractions : a discussion of dimensional co-ordination, by F. Heath ; decimalisation of fractions commonly used in archl drg."

GOVERNMENT

BYGGMÄSTAREN (Stockholm), *1945 No. 17, p. 319 :*
Project by J. Utzon for mobile barracks : separate caravan dwelling, eating, cooking, lavatory units to be moved in tractor-pulled trains and linked into fully organised dwelling system.

COMMERCIAL

ARCHITECTURAL FORUM, *1945 December, pp. 82-8 :*
Women's apparel shop, by M. Lapidus, Brooklyn ; and remodelled sales floor for Davison-Paxton Co. (clothes, millinery), Atlanta, Georgia, by H. M. Heatley.

ARCHITECTURAL FORUM, *1945 December, pp. 117-26 :*
Offices. Some new American buildings and projects for plywood mfg., movie producer and advertising agencies.

TRANSPORT

ARCHITECTS' JOURNAL, *1945 December 5, pp. 415-19 ;*
BUILDER, *1946 February 8, pp. 137-40 ;*
BUILDING, *1946 January, pp. 26-8 ;*
JNL., R.I.B.A., *1945 December, pp. 43-9 :*
An Experimental, prefabd., station for L.M.S. Railway by L.M.S. archts' office. Heavyweight prefab. Fully described in R.I.B.A. and A.J. with particular ref. in former to considerations affecting design.

BUILDER, *1946 January 10, pp. 39-43 :*
Recent London Transport buildings, by Adams, Holden and Pearson. Includes E. Finchley sub-(power) station) ; E. Finchley rail station.

PENCIL POINTS, *1945 December, pp. 75-7 :*
Large hardware warehouse and small retail store, Atlanta, Georgia, by Burge and Stevens.

ARCHITECTURAL FORUM, *1945 November, p. 160 :*
Bus terminal. Project for Southwestern greyhound lines, Dallas, Texas.

SCHWEIZERISCHE BAUZEITUNG (Zürich), *1945 November 24, pp. 237- :*
Airport design inc. illusn and description of Geneva-Cointsin project, by Ellenberger and Camotelli and others.

SCHWEIZERISCHE BAUZEITUNG (Zürich), *1945 December, pp. 283-94 :*
Airport design. Articles, illusns. Swiss airport location and design. Terminal buildings, run-ways. Important ref.

ARCHITECTURAL FORUM, *1945 November, pp. 158-9 :*
Small municipal airport for Hutchinson, Kansas. Project.

AIR TRANSPORT, *1946 January, pp. 25, 28 :*
The evolution of Idlewild, New York's terminal landing way lay-out.

INDUSTRIAL

ARCHITECTURAL RECORD, *1945 November, pp. 118- :*
Factory design. Special issue with articles : the design of factories to-day. Review and forecast by members of Albert Kahn. Access and parking, employee facilities and circulation, feeding, first aid, heating and ventilating, lighting, shipping and receiving. Also article restaurant design (cafeteria), Time-saver standards.

BUILDING, *1946 January, pp. 17-20 :*
Standard factories. Illusn. and description of Min. of Works standard factories built during war.

ARCHITECTS' JOURNAL, *1945 November 29, pp. 397-9 :*
Factory for producing structural laminated plastic board, by D. Pogany for Holoplast Ltd., New Hythe, Kent. Incs. offices.

BUILDER, *1945 December 21, pp. 497-9 :*
Factory and housing estate, Flore, Northamptonshire, by Spencer and Austin [*F./A.*]

ARCHITECTURAL FORUM, *1945 December, pp. 114-6 :*
" Philadelphia Inquirer " Press building. Project by A. Kahn. Complete publication and printing works.

PENCIL POINTS, *1945 November, pp. 72-3 :*
Bottling plant, Baltimore. Project by Reisner and Folger.

BUILDING INDUSTRIES, *1946 January, pp. 48-54 ;*
JNL., R.I.B.A., *1945 November, pp. 3-7 ;*
NATIONAL BUILDER, *1945 December, pp. 106-10 :*
Underground factory ; by H. V. Lobb. Paper to R.I.B.A.

LIGHT AND LIGHTING, *1945 November, pp. 169-70 :*
War-time developments in industrial lighting technique. Note on installation in machine shops, by Messrs. Crompton & Parkinson.

PENCIL POINTS, *1945 November, pp. 78-81 :*
" Sunrise dairies," Hillside, N.J., by Petroff and Clarkson. Processing milk, packaging. Processing dept. open to public view as advert.

WELFARE : HOSPITALS, etc.

HOSPITAL AND HEALTH (*formerly* NURSING HOME) MANAGEMENT, *1946 January, p. 5 :*
" A letter to an architect : be a hospital patient first ! " Notes on design ; noise, corridors, etc.

MODERN HOSPITAL (Chicago), *1945 October, pp. 73-6 :*
Hospitals around the world : 7 examples . . . to meet varying needs in Cuba, Dominica, Argentina, Mexico, Palestine, Australia and China. Illusns. and brief descriptions.

JNL., ROYAL ARCHITECTURAL INSTITUTE OF CANADA, *1945 November, pp. 227-31 :*
" A bit of Canada in England " : Canadian wing to Queen Victoria Hospl., E. Grinstead, for military cases, illusd. and described.

ARCHITECTURAL FORUM, *1945 November, pp. 106-7 :*
Memorial Hospital. Project by W. L. Pereira for S. California. General site plan and elevations.

MODERN HOSPITAL (Chicago), *1945 November, pp. 88-9 :*
" Better care for Negroes." 54-bed hosp., Evanston, Ill., by L. Perkins.

MODERN HOSPITAL (Chicago), *1945 November, pp. 80-1 :*
McMillan Hospl., St. Louis. Ear, eye, nose, throat and psychiatric treatment.

ENGINEERING NEWS-RECORD, *1945 November 29, pp. 77-9 :*
Pacific hospitals built of sheet steel. Standard military hospl. on 8 ft. module ; frame and ext. sheet steel, lining wall board.

MODERN HOSPITAL (Chicago), *1945 October, pp. 88-90 :*
Maternity wing, Ryl. Jubilee Hospl., Victoria, B.C., by H. Whittaker. 59 normal beds, 8 observation.

PENCIL POINTS, *1945 December, pp. 92-6 :*
Daylighting for hospitals. Pt. 1. Article by I. Rosenfield. Introductory notes on necessity for daylight and broader elements of design for d.l. Illusd. diags.

ARCHITECTURAL FORUM, *1945 November, pp. 104-5 :*
Health Centre. Project for Dept. of Public Works, Maspeth and Forest Hills, Long Island, by Frost, Clay and Corrigill.

ARCHITECTURAL FORUM, *1945 December, p. 106 :*
General Electric Co. works dispensary for 15,000 employees, by V. Aiken.

REVISTA DE ARQUITECTURA (Buenos Aires), *1945 October, pp. 395-9 :*
Dispensary for " La Liga Israelita contra la Tuberculosis." Modern design. bdg. by Smilevitz-Blasco.

MODERN HOSPITAL (Chicago), *1945 November, pp. 74-5 :*
Rehabilitation centre for ex-service men. Organisation chart represented as bdg. plan. Medical, psychiatric and locational treatment.

JNL. ROYAL ARCHITECTURAL INSTITUTE OF CANADA, *1945 November, pp. 236-8 :*
Evolution of Sanatorium architecture [in Canada] by J. H. Holbrook, Medical Suptd., Mountain Sanatorium, Hamilton.

BUILDER, *1946 January 11, pp. 44-9 :*
Nurses' home, Queen Charlotte's Maternity Hospital, London, by Hall and Easton & Robertson.

MODERN HOSPITAL, *1945 October, pp. 68-70 :*
Nurses' home, project for home for 50 student nurses.

REVISTA DE ARQUITECTURA (Buenos Aires), *1945 September, pp. 366-75:*
The illumination of operating theatres. Article by J. C. Porta.

RECREATIVE

BUILDER, *1945 November 30, p. 429 :*
Lyceum Theatre, London, remodelled as a dance hall.

BYGGMÄSTAREN (Stockholm), *1945 No. 21, pp. xvi, 399-408 :*
Project for a Stockholm Olympic games stadium. Prize drawings in Swedish archl. schools exhibition.

SCHWEIZERISCHE BAUZEITUNG (Zürich), *1945 December 8, pp. 258-69 :*
Hallenstadion, Zürich-Oerlikon. Covered stadium for 11,000, cycling track sports arena. Steel and R.C. construction, mech. equipt., heating and ventg. described in detail. Illusd.

ARCHITECTURAL FORUM, *1945 December, pp. 73-9 :*
"Navy architecture. Camp Parks, Calif." Bruce Goff, archt. Recreation centre, chapel, library, etc. ; interesting design using normal engineering materials.

BRIDGES

ENGINEERING NEWS-RECORD, *1945 November 1, pp. 80-6 :*
France begins bridge reconstruction on Seine and Marne at Paris. Illusd. article by W. G. Bowman.

RELIGIOUS, SEPULCHRAL

PENCIL POINTS, *1945 December, pp. 53-78 :*
Architecture and the church : special No. inc. articles on and illusns. modern church design in U.S.A., Switzerland. Incs. also synagogue project for Providence, R.I. and Asplund crematorium, Stockholm.

ARCHITECT & BUILDING NEWS, *1945 December 7, pp. 153-5 :*
Church in Denmark "for young people," by E. Muller.

BUILDER, *1946 January 11, pp. 33-5 :*
St. George's Cathedral, Southwark. Roman Catholic cathl. originally by A. W. N. Pugin : design for rebuilding after blitz destruction, by R. B. Craze.

SCHWEIZERISCHE BAUZEITUNG (Zürich), *1945 Nov. 17 :*
Exhibition of Zürich tombstones and memorials. Illusd.

BYGGMÄSTAREN (Stockholm), *1945 No. 20, pp. 383-6 :*
Boras crematorium and chapel, by H. Ericson, town architect.

BYGGMÄSTAREN (Stockholm), *1945 No. 19, pp. 360-82 :*
Malmö crematorium and chapel, by Arne Jacobsen.

SCHOOLS

ARCHITECT & BUILDING NEWS, *1945 December 21, pp. 186-8 ;*
ARCHITECTS' JOURNAL, *December 27, pp. 475-6 ;*
ARCHITECTURAL DESIGN AND CONSTRUCTION, *1946 February, pp. 56-7;*
BUILDER, *1945 December 21, pp. 501-3 ;*
EDUCATION, *December 28 ;* (discussion) *1946 January 25 ;*
JNL., R.I.B.A., *1946 January :*
The planning and construction of schools. Paper to R.I.B.A., by C. G. Stillman, latterly cy. archt. West Sussex, now Middlesex. Sch. planning, prefab. and light structure, temporary *versus* permanent bdg. Only full rept. : J. R.I.B.A.

UNIVERSITY BUILDINGS, COLLEGES, TECHNICAL SCHOOLS

BUILDER, *1946 January 11, pp. 36-8 :*
Gordon College, Khartoum. Project for redevelopment, by W. G. Newton.

BUILDER, *1946 January 4, pp. 6-9 :*
School of Oriental and African studies, London University (Woburn Square), by Adams, Holden and Pearson (1939 ff.). Views, plans, inc. teaching and research library.

ARCHITECTURAL FORUM, *1945 November, pp. 99-103 :*
Medical college for N. York hospital. Project by Skidmore Owings and Merrill.

ARCHITECTURAL FORUM, *1945 December, pp. 110-11 :*
Vocational school (agricultural) for farm children and returned soldiers, etc. Project by W. N. Caton for Winfield, Kansas, Bd. of Edn.

LABORATORIES

ENGINEERING NEWS-RECORD, *1945 October 25 (News-issue), p. 10-11 :*
Buildings with non-magnetic properties. Brief description and illusn. of Navy Ordnance lab.

ARCHITECTS' JOURNAL, *1946 January 3, pp. 7-10 :*
Metals and minerals research building for Illinois Institute of Technology, by Mies van der Rohe ; his first bdg. in U.S.A. Also project for library and administration bdg. in Illinois Inst. of Tech.

PENCIL POINTS, *1945 November, pp. 66-7 :*
Horticulture Research Buildings, U.C.L.A., Los Angeles, Calif., by Hunter and Reichardt. Glasshouses ; laboratories.

MUSEUMS, GALLERIES

BUILDING, *1946 January, pp. 12-15 :*
The Prinz Hendrik Nautical Museum and Technical Inst., Rotterdam, by A. v. d. Steur, built during the war.

WERK (Zürich), *1946 January, pp. 32-6 :*
Museum of modern art, New York. Well described and illusd.

ARCHITECTURAL FORUM, *1945 December, pp. 80-1 :*
Art gallery (commercial) for Associated American Artists, Chicago, by H. Richards and H. Harman.

ARCHITECTS' JOURNAL, *1945 December 20, pp. 446 :*
Guggenheim Art Gallery, New York. Project by Frank Lloyd Wright ; illusn. of model.

JNL., ROYAL ARCHITECTURAL INSTITUTE OF CANADA, *1945 October, pp. 197-207 :*
Art gallery lighting. Rept. of Ctte. on Art gallery lighting of the Illuminating Eng. Soc., N. York. Analysis of requirements for various types of exhibit. Methods. Bibliog.

STUDIOS ; BROADCASTING STUDIOS

ARCHITECTS JOURNAL, *1945 December 13, pp. 433-6 :*
Drawing offices for the Bristol Aeroplane Co., Filton, by E. Ross.

ARKITEKT (Istanbul), *1945 No. 9-10, pp. 204-13 :*
Istanbul broadcasting station. Competition designs.

ARCHITECTURAL FORUM, *1945 November, pp. 150-1 :*
Television transmitter station. Project by Birla and Abel.

DOMESTIC (general)

CALIFORNIA ARTS AND ARCHITECTURE, *1945 October :*
"Case study house" No. 6, by Newton. Analysis of living and housing needs of the future illusd. by Neutra design.

ARCHITECTURAL FORUM, *1945 November, pp. 134-5 :*
"House for a warm climate." Project by Paul Laszlo.

ARCHITECT & BUILDING NEWS, *1945 December 7, pp. 156-8 ;*
BUILDER, *December 14, pp. 481-4 ;*
JNL., CHARTERED SURVEYORS' INSTITUTION, *1946 January, pp. 43-56 :*
Modern methods of house construction. Paper to C.S.I., by J. W. Laing (builder). Prefabrication and trad. methods ; structure costs and heat losses analysed. Comparative costs and merits of various construction forms. Methods of wall constn. (illusd.). Thermal insulation. Tables of conductivity, "K" values, etc. for materials.

ARCHITECTS' JOURNAL, *1945 December 13, pp. 439-40 ;*
ARCHITECTURAL ASSOCIATION JNL., *October-November, pp. 23-8 :*
Science in the construction of houses. Papers to Archl. Assn. by W. Allen of Bdg. Research Stn.

ARCHITECTS' JOURNAL, *1945 December 6, pp. 411-4 :*
"Solar house" : a flexible unit construction, by George F. Keck. House designed to utilise sun-heat scientifically for internal warming without overheating in summer.

BUILDING, *1946 January, p. 29 :*
The Davis House : traditional type house designed for rapid erection by use of mechanical plant. K. Barter, archt.

HOUSING

NATIONAL HOUSE BUILDER AND THE BUILDING DIGEST, *1945 December :*
"From Tudor Walters to Dudley—is the step big enough ?" by J. Schreiner. Critical article on currently approved house plans. Illusd.

BUILDING, *1946 January 11, pp. 51-3 :*
Some thoughts on housing. Prefabn. : problems and opportunities. Article by J. Howe. General description of problems and possibilities. Illusd. recent exps.

REVISTA NACIONAL DE ARQUITECTURA (Madrid), *1945 June, pp. 215-44 :*
Low income, temporary and emergency housing. Examples from Spain, England and U.S.A. Illusd.

BUILDER, *1945 December 14 ;*
BUILDING INDUSTRIES & SCOTTISH ARCHITECT, *1945 November, pp. 22-3 :*
Glasgow's housing plans. Illusns. of models of sm. houses and 8-storied flats, by R. Bradbury, Director of Hg.

BUILDER, *1945 December 14, pp. 476-7 :*
"A new technique of stone construction" : experimental houses at Pollok, Glasgow, by R. Bradbury, Hg. Director ; faced machine-cut stone.

(To be continued)

COLOUR IN BUILDINGS

WILLIAM ALLEN, B. Arch, [*A.*]

Of the Building Research Station

A Paper read at a Meeting of the R.I.B.A. Architectural Science Board on Wednesday, 3 April, 1946.

HOWARD M. ROBERTSON [*F.*] in the Chair.

Recent papers arranged by the Architectural Science Board have discussed painting, plastering, and painting on plaster; and now, to "round off" the group as it were, we are to attempt an objective study of colour as it is employed in design.

A little consideration of colour practice to-day enables us at the outset to identify what seem to be three main lines of approach, namely :—

(1) Towards the light-coloured environment.
(2) By the vigorous use of strong colours.
(3) The utilitarian use of colour.

We will see in a moment that these are also convenient lines of approach for our present study; but before we embark upon it we should refer briefly to one point of history which is an influential factor to-day.

From time immemorial scientists have speculated on the theory of colour as ardently as artists have devoted themselves to its use, and in the history of modern science, experimental studies first in physics, then in physiology and psychology have produced a formidable body of knowledge. On the whole this has had less direct influence on the teaching or practice of colour in design than one might have expected, but it would have been entirely unnatural not to find some movement of each side towards the other; and this has, of course, been the case. Artists who use colour have shown a markedly experimental attitude towards their work for 60 or 70 years or more, and rather more recently we have also seen scientists taking a part in practice. Both trends are active to-day, and presumably will continue until fusion of the two viewpoints is effected.

If we bear this in mind and now look again at our three lines of approach, we will see that we have here examples of each trend. The light-coloured environment represents a fairly recent viewpoint of many designers (and is the most popular form of decoration among the English people at the moment), while the vigorous use of stronger colours—such, for instance, as the decoration of different walls in the same room with contrasting colours—represents a current objective in design. On the other hand the utilitarian use of colour (by which is meant such practices as we now find in factories, to improve visual efficiency) seems to receive its inspiration almost entirely from scientific work. It is suggested, therefore, that we might usefully group the first two and look at them in terms of some scientific criteria, and take the third later and consider it from the designer's viewpoint.

Light Colouring and Strong Colours in Decoration

Sixty years ago the popular practice in decoration was to use dark colours—mostly browns and greens—and to-day they are replaced by off-white and cream. Why? We hear several explanations: one, that it increases the amount of light in rooms, another that it makes rooms seem "light and airy," and still a third that it makes them seem larger. If these are correct, or even roughly so, and if they were thought good objectives, is it not somewhat surprising that there is a growing practice of using much more saturated hues, particularly in contrasting colours on different surfaces in the same room? This is a practice as different from the last as was the change from dark to light decoration. We might suspect it to be merely an experimental outburst, or a revolt against a practice which was obviously limited in scope; probably it has elements of both. But again conscious reasons are sometimes quoted, notably that it "breaks up the shape of a room" and—somewhat oddly—that it makes it seem larger.

Apart from this last obvious conflict, the use of strong colours implies other contradictions of the merits claimed for light environments. For instance, what happens to the so-called "light and airy" effect, and to the increased intensity of light in a room? Are these real merits, and do we lose on both counts when we use strong colours—and if we do, does it matter? We ought to look at one or two of these points more carefully, for if we can ask and not answer questions of this kind, it may be evidence that we do not properly understand and appreciate what is happening.

Consider, for instance, the popular idea that light colours make a room seem "light and airy." Is this some curious psychological phenomenon associated perhaps with a reaction to some unhappy trend in man's affairs? There is at least a coincidence to support the view. I think we may find another reason, however, though probably not the whole cause.

If there are strong contrasts of light and dark in a room we know that it has an adverse effect upon the retina of the eye. The mechanism is asked, in a sense, to adjust itself in two opposite ways at once, which it obviously cannot do, and the result is a feeling of discomfort on our part, with an actual reduction in our ability to see. In extreme cases we call this glare, and in all degrees we associated it with various feelings of irritation, depression and physical fatigue. I am going to suggest that when there is relative freedom from these sensations the pleasure and comfort we feel could be expressed by the term "light and airy," suggesting good visibility and a feeling of freshness, and therefore that the emphasis lies on glare rather than light colours.

This view is supported by the general trend of illumination practice. During the period when dark colours gave way to pale hues, artificial light underwent a change from weak to relatively strong sources. In the ordinary course of events, had colour schemes remained dark this would have led to a sharp increase in brightness contrasts and presumably to a corresponding sense of glare discomfort. One way to avoid this was to keep down the brightness of the sources by suitable fittings. This was not done (witness the type of shade which the enormous majority of people buy) and the only alternative was to lift the general brightness of the environment. It seems to me that this probably accounts for the greater part of the wide popularity of a movement which also had the support of advanced designers—perhaps a too rare event in these times.

It does not follow, of course, that because light colours are generally safer than dark ones, that only light colours should be used. The fundamental rule, physiologically, is to keep down brightness-contrasts, and within that law we can presumably operate with fair freedom. Thus if we can keep down the brightness of the source there seems no reason why we should not successfully use strong and dark colours; but success seems certain to depend on obeying the rule scrupulously.

One other point requires a reminder in this connection: the window is our source of daylight, and has to be watched as carefully as any artificial source. By that it is meant to suggest that unless the view of sky is screened in some way, the proper practice would be to use light colours on the surfaces around the window.

Fig. 1.—Photograph of a room in which different colours have been used on different surfaces; the ceiling is white, the side walls a light tone of grey, and the end wall a very dark green. The photograph was taken by permission of Hugh Casson [A.].

The Sense of Space in a Room

The explanation offered about the use of light colours may be correct, or at least a main part of the cause, but it does not help us to understand why the Victorians should have liked dark colours in the first place. However, we may find a reason if we examine the effect of colour on the apparent size of a room.

If we consider the means at our disposal to create an illusion about the size of a room we will recognise at least two possibilities by colouring—one through the use of one of the principles on which the technique of camouflage is based where, by putting different colours on different surfaces one can change the apparent shape of an object; and the other through the choice of colours which in relation to their neighbours appear to advance or recede. To some extent the two points are linked.

It seems to me that the first is the one which most often prompts designers to use different colours on different surfaces in confined spaces such as stair-halls, corridors and small rooms. Those are obvious places because, though they may be adequate for traffic and their other uses, a small, enclosed area obviously gives no pleasure and might just as well be made to appear larger if that is possible. I understand that the technique was used in some big war-time hostels, where one would expect it to work very well. On large rooms the argument does not seem so compelling.

Probably we could learn a great deal from a closer study of the principles of camouflage, and it will be interesting to hear in due course what advances have been made during the recent war. Here, however, we may perhaps move on directly to the second point, which seems to have attracted rather more speculation and is itself one of the major elements in camouflage techniques—the idea of retiring and advancing colours.

In this matter we find ourselves again faced with widely held opinions which conflict among themselves and with what little evidence there is. Everyone will recall, for instance, hearing some people say that light colours make a room look larger, or that a white ceiling seems higher than a dark one. Compare this with the following remark, from the late 1880's:

> "White walls I have so long denounced that I need not here add venom to their death blow—society is rapidly giving them up. They greatly diminish the size of the room, as a white ceiling diminishes its height. . . . A dark wall adds size . . ."

The writer was a Mrs. M. E. Haweis (1)—a somewhat noted critic in her time I believe—and she had much more to say along the same lines. But should this view be regarded simply as a rather odd fancy of the times, not in line with the more advanced knowledge of to-day, consider the following case, described by my colleague A. F. Dufton (2):

> "On examining the kitchen of my house, which is dated 1642, I was surprised to find that the ceiling was originally painted black and embellished with red. This colouring has now been restored, and it is quite clear that the room was designed with a black ceiling, which, in this case, is very much pleasanter than a white one. The kitchen measures 17 ft. by 12 ft., and the ceiling is so low (6 ft. 8 in.) that when white it was far too conspicuous. Now that it is black again it is hardly noticed, and the meaning is apparent of certain ceiling decorations before the doors; they are provided to draw the attention of anyone entering the room to the existence of the ceiling and so to prevent damage by broom-handles—or, perhaps, in former days, by halberds and other weapons. The black is edged with a decorative border of red and is carried into the corners of the room; it is of pincushion shape, the colour of the walls being taken up on to the ceiling in flanches to give a vaulted effect, which makes the room appear to be of greater height than it actually is."

Clearly this supports the idea that dark colours rather than light make a room "seem larger." But what of experimental evidence? We know of at least one modest study of retiring and advancing colours, by Luckiesh in America nearly thirty years ago (3). His experiments were conducted with red and blue lights, in a dark environment, using observers who moved the lights (by remote control) until they appeared equidistant. It was found that red was the more advancing colour of the two, and as a result Luckiesh tentatively suggested that the sequence of the spectrum, from red, through yellow to blue, was perhaps the correct index of recession. It is not very easy to fit white and black into this arrangement, nor is it possible to make it coincide with the views of artists, who normally seem to hold that yellow precedes red in the sequence. One would have thought that luminosity or brightness, together with the degree of saturation, would be more likely criteria. Of course black is not a colour in the sense of the term "colour vision," and its relationship to colours in the sequence of recession may therefore be quite unusual. In the absence of colour (i.e., blackness) presumably the receptors concerned in the retina of the eye receive no stimulæ, and the mind would then lack consciousness of a black surface unless it were defined in some other way. This could conceivably account for emphatic recessional effects associated with black.

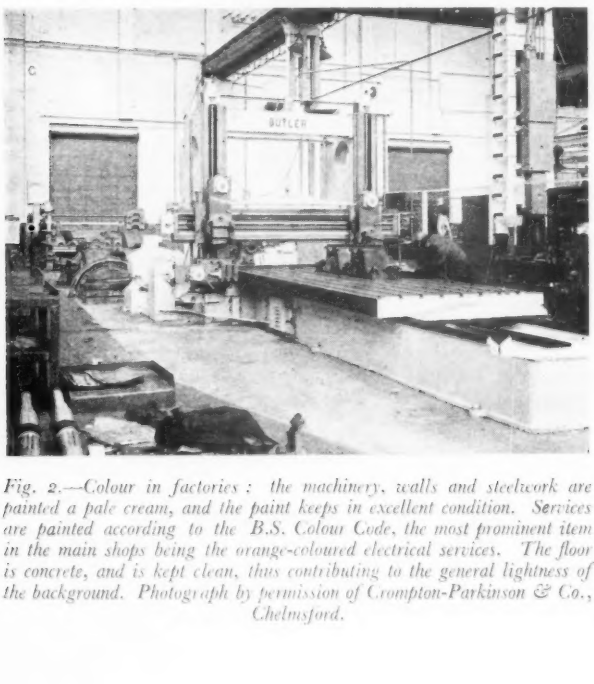


Fig. 2.—Colour in factories: the machinery, walls and steelwork are painted a pale cream, and the paint keeps in excellent condition. Services are painted according to the B.S. Colour Code, the most prominent item in the main shops being the orange-coloured electrical services. The floor is concrete, and is kept clean, thus contributing to the general lightness of the background. Photograph by permission of Crompton-Parkinson & Co., Chelmsford.

Many people will be familiar with the paintings by Mr. Ben Nicholson in which an experimental attitude to recession in colour is apparent. However, in a short paper it is not possible to give them the attention they deserve, and we will have to pass them by for the moment, merely noting their great interest in this connection.

"Texture" and "Richness"

We have seen that out of certain popular, but often conflicting, ideas about colour in buildings we have been able to find our way towards one or two principles, for which we could wish increased scientific support, but which nevertheless may give us some guidance in difficult byways. We have not mentioned one point of much importance, to which I should like now to turn.

Everyone with pretensions to artistry will have opinions about "texture" or "richness" in decoration, of course, but it does not seem to have tempted the scientist. From his viewpoint, therefore, we can merely speculate, though with fair certainty on some points.

Artists throughout history have known and exploited the idea that a mild irritation of our senses gives us a certain stimulus and lively pleasure. In music we employ dissonance for the purpose, and in lighting we use sparkle, which is a mild form of glare. We usually find, in addition to the somewhat refreshing feeling it gives us, that the sense concerned acquires a slight increase of sensitivity, from which we may perhaps derive the feeling of "liveliness." Thus certain forms of glare which in the extreme cause discomfort and real disability may, in mild forms, slightly improve the accuracy of vision, so that we perceive detail better.

It is usual, where a principle of this kind is known to operate in one or two cases, to find it in all similar instances if we look. I do not know if anyone has attempted to identify it in colour vision, but I should like to suggest it is to be found there, and that possibly it is related to what has been termed here "texture" or "richness."

It will be noted that in the other examples of the effect its cause sometimes lies in different stimuli given to closely adjacent receptors in the organ. Thus dissonance is experienced when notes a tone or semi-tone apart are sounded together, and sparkle is observed when the points of light are very small. In colour vision it seems quite reasonable to suppose similarly that the close association of small patches of different colours would produce a somewhat similar effect, and it is this which leads me to the idea that colour "richness" may be another example of the effect.

If one examines "rich" colouring fairly closely, one finds some support for the suggestion. I had some training myself in a school of landscape painting where "richness" was deliberately sought. It was explained that in compounding a brush stroke of colour, one should learn to pick up on the brush the right amount of each colour needed for the compound, turn them not more than once on the palette, and allow them to "break" on the canvas. The result (in expert hands) was to produce a brush-stroke of the desired general hue, but which on

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(2) The Builder, Vol. 162, 13 Feb. 1942 (Letter to the Editor).
(3) M. Luckiesh, in Am. J. Psych. 29, p. 182, 1918.

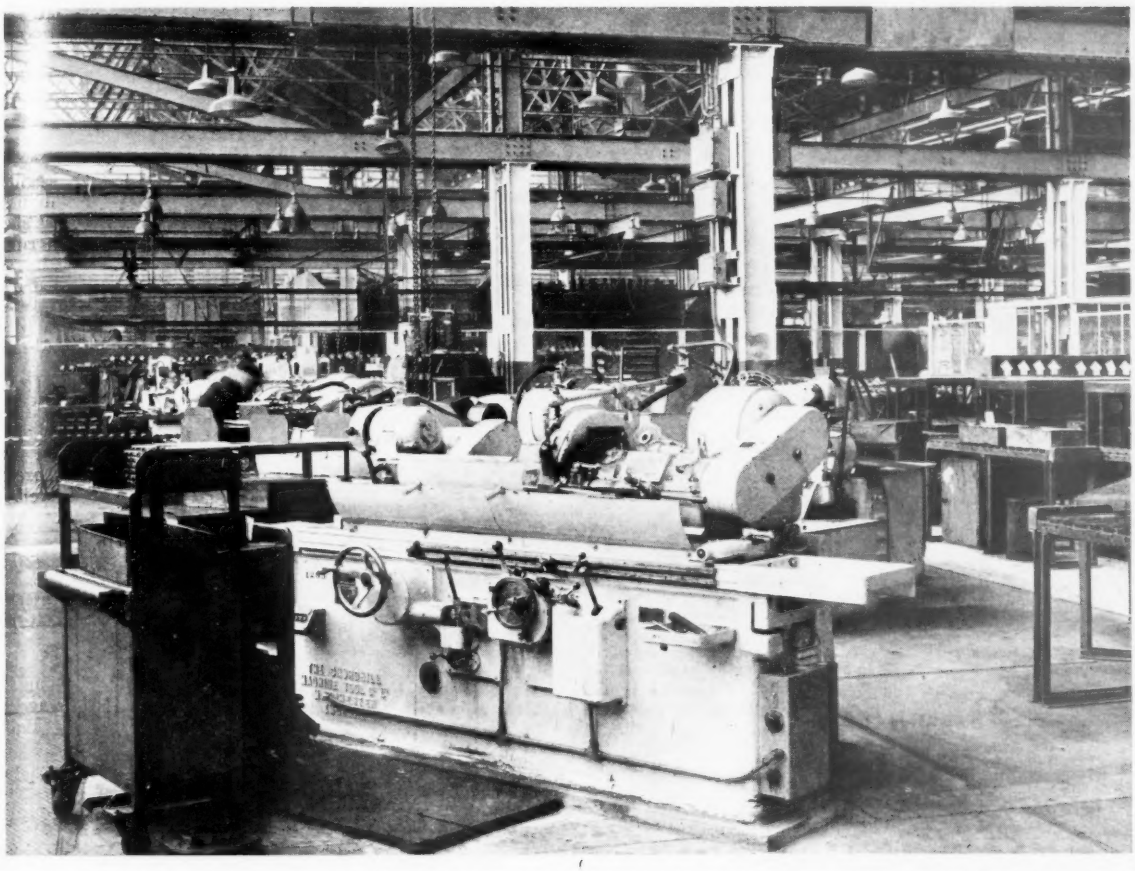

Fig. 3.—The same factory as shown in Fig. 2. In addition to the cream-coloured machinery and the orange electrical gear, the tool boxes standing beside the machines are a fresh green colour. It is proposed to paint the roof a light colour in due course. Photograph by permission of Crompton-Parkinson & Co., Chelmsford.

close inspection was seen to have lines of several very different, pure colours, which, while not obvious to the eye, must nevertheless have had an effect on the different receptors. We were warned also that if the colours were too smoothly mixed they would have a "tired" look. The idea was exploited, perhaps somewhat less subtly but more as an experimental technique, by the group of pointillistes who formed part of the modern French school of painting.

Perhaps "texture" and "richness" do not seem synonymous terms and their association here should be explained. The decoration of walls of buildings by painting usually leads to flat colours in which richness (as the term is used here) could not easily be obtained. In the circumstances, the sensible thing would seem to be to turn to texturing the surface so that light will fall on the colour differentially and produce something of the same effect. That is the only reason for linking the two.

Stippling is, of course, another possibility along this line. In effect it is a form of "pointillism" made by another method, and it can have the merits of some of that work. For instance, in working in a pale ground, the pointillistes produced a general de-saturation of the overall effect without losing the advantage of putting different strong colours near one another. It is a sort of "pale" richness and the effect is curiously luminous—so much so, in fact, that one suspects other phenomena are present.

It is difficult to say whether or not colour practice to-day consciously recognises something of this sort. So far as wall surfaces themselves are concerned one would say not, because great areas of flat colour are employed regularly. At the same time there is a considerable interest in texture for its own sake which may simply mean that the two elements have been divided for the time being. That would be characteristic of a period of experiments. If the suggestions here have any foundation, however, we can assume that the ideas which have been embraced by the term "richness" will survive any temporary lack of interest in them which may be current and ultimately re-establish their proper position in colour-practice. For that reason it would be useful if they were given further thought.

An Interim Summary

We have now touched upon several aspects of decoration with colour, and we have tried to relate them to some scientific data. Tentatively we have arrived at a point where we can identify certain guiding principles more or less closely bound up with the following topics :—

(1) The reduction of brightness-contrasts in the environment.
(2) The sensation of "recession."
(3) The sensation of "richness."

Now let us turn to the last of our original three lines of approach —the utilitarian use of colour—where practice is being established more by scientific or technical people such as lighting engineers and psychologists than by the designer.

The Utilitarian use of Colour

The outstanding examples of the utilitarian use of colour are in the American factories, where during the war colour seems to have been used in much the same scale as has music in England. There are, of course, English examples, but still in much smaller numbers.

The specific purposes of colour in industry are fairly easily identified as follows :—

(1) Improved vision through proper contrasts at the point of work.
(2) Increased safety.
(3) Better morale among operatives.

The first two of these rest mainly on physiological data, the last upon psychological.

The idea of using contrasts to improve vision at the point of work perhaps seems to contradict earlier remarks in which strong contrasts were deprecated. The latter concern the environment at large, however, and not the point to which attention is to be directed. There it is desirable to have both brightness and contrast because these automatically attract our attention. The purpose of reducing brightness-contrasts in the environment is, in fact, to minimise the risk of distraction or competition with the main centre of interest. Thus the skilled user of colour in a factory will paint the bodies of machines mainly in uniform and fairly pale hues, so that the general background is kept light and simple, and not distracting. In some cases, such, for instance, as a spot-welder, a special screen of appropriate colour may be fitted behind the welding-points to ensure a good immediate background. Similarly, a great interest is being shown in light-coloured floors for factories.

Safety has largely to do with the use of special, saturated colours on dangerous moving parts and on guards. It is interesting here to note that there has been a movement away from red, which in the past has been associated with danger, to a yellow-red, or orange, which is said to have better physiological characteristics for the purpose. Naturally the use of saturated colours is restrained, and the use of saturated complementary colours is entirely avoided because of the confused vision which it may cause.

It seems less easy to attempt a summary of colour factors in morale, though their general character can be seen in the following table, published in *The Decorator* (1942, No. 495, p. 49) :—

Red : A stimulating colour, which excites and increases the working power of the brain.
Yellow : A stimulating colour, which helps energise the brain and which in colour therapy aids in treating colds, paralysis and chronic conditions.
Green : Not necessarily depressing. Possesses cooling effects and is useful in the abatement of excitement. Counteracts brightness of solar light.
Black : Useful for toning strong colours, and not necessarily depressing. Best use is in combinations.
White : Cheery and attracts sunlight, but alone is cold. (*Note :* cf. Mrs. Howers, op. cit.) Stimulating if used with red, yellow or orange.
Purple, mauve : Are sedative and conducive to sleep.

A Paint Research Memorandum on colour and psychology (No. 122) also describes other interesting notes. For instance, while yellow walls may suggest, by association, the idea of sunshine and warmth, in aircraft they are found to induce air-sickness, blue being preferred. Again in a New York office originally painted yellow, with air conditioned at 10 deg. F., typists complained of cold when the colour was changed to pale blue.

Clearly the psychological factors, though difficult to establish, are of great importance, and in factories it is claimed that colour properly used has a marked effect in reducing absenteeism and staff turn-over, as well as in the attitude to work.

In this general connection it may be useful to mention two or three cases typical of several on which the Building Research Station has reports.

Case 1

Colours	Machinery	—	nothing special
	Shafting	—	grey green
	Walls	—	cream
	Floor	—	brown (lino)
	Doors		
	emergency	—	red
	others	—	bright blue
	Pipes	—	pale blue
Stated Purpose	To make the rooms bright and cheerful.		
Stated Result	Effective, judging by the fact that labour sent to the firm which when it arrived was shoddy and dirty became reasonably chic after a short time—much more so than in other factories without special colour, owned by the firm.		

Case 2

Colours	Machinery		
	body	—	aluminium
	moving parts	—	buff
	danger parts	—	red
	Steelwork	—	aluminium
	Walls and floors	—	nothing special
Stated Purpose	Safety (emphasized) and relief of depression.		
Stated Result	Atmosphere cheerful, colours wear well, and operators keep machines clean.		

Case 3

Colours	Machinery	—	cream (B.S.S. 52)
	Walls		
	dado	—	green (B.S.S. 18)
	remainder	—	cream (B.S.S. 82)
	Ceiling	—	white
	Floor	—	not stated
	Services	—	Standard Colour Code (B.S.S. 617/1935)
Stated Purpose	Freshness, cleanliness and to assist lighting during blackout.		
Stated Results	" Successful."		

It is interesting to see the variety of forms taken by morale effects, and interesting too to note the variety of colouring used. Very often in American work the substance of colour policy lies in the use of two moderately pale hues of complementary colours, such as buff and green, with one colour, orange, for the danger points. English practices seem to have a less clear grasp of the principles involved as yet, or else are pursuing other objectives.

It is obvious that in a development of this kind, potentially affecting the welfare of so many individuals, it is desirable to help it along in every possible way, at the same time giving it whatever study is necessary to ensure that practice is following sound lines. In this country we cannot claim to be making as much progress as we ought and the reason may lie in the fact that we have not cleared our minds about certain points. Let us, for instance, ask ourselves the following questions :—

(1) Who is going to do the work? Is it to be the lighting engineers ; the architect (if there is one ; often there is not on factories) ; the welfare officer ; or an independent colour-consultant?
(2) Can we identify more closely the purposes of colouring and the best ways to meet them? Are we watching the results of theory when it is applied?
(3) There are some awkward technical points, such as light-coloured floors which are durable and easily cleaned. Do we know the possibilities in this direction?
(4) What are the best paint specifications for walls, steelwork and machinery?
(5) Who is going to paint the machines—the maker or the user?
(6) Is any thought being given to the special requirements of other buildings, such as schools, office buildings and hospitals?

All these—and there may be others—are factors in establishing a sound and widespread practice. They cannot be answered here.

and in some cases they cannot yet be answered at all; but it is in the general interest of improved colour practice that we should try to clear them up soon.

Conclusion

We have examined here three lines of approach to contemporary colour practice, two in which the artist's viewpoint has thus far predominated, and the other—on the whole quite new—in which most of the inspiration is scientific. In each case evidence has been quoted to show that the two viewpoints are moving towards a fusion, and an attempt has been made to identify some of the principles on which various practices may be based so that the nature and direction of current developments may be more clearly seen.

At the same time it must be noted that a successful fusion depends on a considerable study of colour-practice in terms of the many complex physical, physiological and psychological factors which actually give it its shape, and it would be impossible at the present time, and in a short paper, to hope to do more than touch with hesitation some of the more obvious points.

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DISCUSSION

Extracts from Speeches

DR. W. S. STILES: I should like to congratulate Mr. Allen on tackling what is really a very difficult group of problems covering a wide territory, most of which is border country between art and science. The remarks I wish to make in opening the discussion come necessarily from the scientific side of the border.

Mr. Allen suggests that the introduction of more powerful light sources in recent years was largely responsible for the trend towards very light colour schemes, the aim being to reduce discomfort from excessive contrast. At first sight it might appear that since with increase in power of the source, the brightnesses of all surfaces in a room are increased in the same proportion, the brightness contrasts, i.e., the relative brightnesses, remain the same and no increase in discomfort should be experienced. It happens, however, that systematic studies of this point have been made by American scientists, and these show quite clearly that the maximum brightness of a light patch of fixed size which just fails to produce discomfort when seen against a uniform background, certainly increases with the background brightness but at a less rapid rate. Thus a given ratio of source to wall brightness may be innocuous at a general lighting level of, say, 5 ft. candles but objectionable at one of 50 ft. candles. That is not only a deduction from laboratory tests; it has been the experience of lighting engineers in America, where they have used much higher levels of illumination than we, that their high power installations do suffer in some way and they have ascribed it to that cause. It seems, therefore, that there is substantial evidence in favour of Mr. Allen's view as to why there is a tendency to decorate in a lighter shade when the lighting level is raised.

Can the same result be achieved as Mr. Allen suggests by reducing the source brightness while retaining walls of low reflection factor? I think some caution is necessary here, as other experimental work indicates that for a single source the total candle-power rather than the actual surface brightness, may be the determining factor in discomfort, assuming, of course, that such extreme cases as bare filaments are excluded. It may be necessary not only to reduce the brightness of the source but also to replace it by several separate sources located at widely spaced positions in the room.

The sense of spaciousness in a room raises a host of difficult psychological issues. With regard to the phenomenon of advancing and retiring colours as studied by Luckiesh for example, it is to be noted that the effects are differential effects, a red figure on a black ground stands out more than a neighbouring green figure. We may ask in this connection what would be the role of furniture. Would a red sofa against a green wall give the illusion that the wall was farther behind the sofa than in fact? Or if the colours were reversed where would the green sofa appear to be? Perhaps the effects of colour as such on the impression of spaciousness are comparatively slight and the general pattern of a room and its contents may be the dominating factor.

"Richness" of colouring, Mr. Allen suggests, may result from the close association of small patches of different colours. Presumably these must not be so small or so remote that they cannot be resolved by the eye when held steady, and on the other hand they must not be so large that they are clearly appreciated as grossly distinct areas each of uniform colour. It might be profitable to study scientifically the colour appearance of a mixed colour pattern in which the elements of the pattern are near the limit of resolution by the eye. Involuntary eye motions are likely to play a role here. We certainly know that when the speed of a flickering light patch is reduced to just below the value at which flicker is perceptible we get a kind of richness—an enhanced brilliance and variations in colour. I would say, however, that the "tired" effect of colours which are too well mixed on the palette to which Mr. Allen refers, may have the less subtle explanation that well mixed colours compound by the laws of subtractive colour mixture whereas with the alternative technique mentioned by the speaker the laws of additive colour mixture apply.

MISS E. VERITY: The first point of interest to me is that part of the paper which refers to Victorians. Mr. Allen asked why they liked dark colours. I would suggest that it has a historical basis. The Victorian era followed the Adam brothers period when light colours and delicate decorations were used and that followed on from the Renaissance period when heraldic colours and bold decorative devices were popular. At the beginning of the twentieth century we became rather puritanical and had practically no decorations. That period was a contrast to the Victorian and we are now emerging from it.

I should like to make a plea for the standardisation and classification of colour terminology so that when we speak of colours we all mean the same thing. It should be possible to specify an intensity of a certain colour by a certain symbol and also its hue and lightness or darkness.

MR. HARTLAND THOMAS: The question of whether colours recede or come forward must partly be derived from our experience of colours in the natural landscape. I have not very much experience in painting, but what little I have tells me that it is necessary to put in more blue to get distance. It is not as simple as that but this is, I think, an important line of thought. Similarly in the shadows of strongly coloured objects I believe I am right in saying that it is necessary to put some of the exactly opposite colour into the shadow to heighten the effect of the shape of the object. In camouflage technique I imagine that you learn the ordinary rules of colour and then reverse them for the purpose of deceiving.

MR. G. J. MONRO: A certain medical officer who is a welfare officer in a large industrial plant says that blue, or certain shades of it, closely followed by heliotrope, produces distaste in a percentage of the workpeople, possibly amounting to deep depression. He says that the percentage of people who are allergic to blue is greater than the percentage who are allergic to yellow or green. Could Mr. Allen say whether there is any other evidence in support of that?

MR. IORWERTH WILLIAMS: I have read articles in the American Press which refer to colour in factories to painted machines and to the colour of the floor. Has the Building Research Station any data as to what materials were used on the floors, because that is a problem which directly affects me? It is my job to find a light colour for floors which will be exposed to industrial wear and to acids and oil.

DR. W. D. WRIGHT: With regard to Mr. Allen's remarks on nature, has he any specific programme of research in mind? I would certainly agree that it is an important and interesting subject for study, but my ideas as to the kind of observations to make, and where the results might lead, are somewhat nebulous.

One explanation for advancing and receding colours, at least for small areas of colour, is based on the eccentricity of the eye-pupils. If the pupils are decentred outwards, red is seen in front of blue and vice versa. (See Duke-Elder's Text Book of Opthalmology, p. 1067). Since the decentration is likely to differ from one observer to another,

this can account for the contradictory statements in the literature.

I hope the colour coding of pipes will not be overdone. We must remember that 8 per cent. of men are colour blind and confusion between the pipes might have disastrous results.

On the question of the relative importance of light and dark ceilings, it would seem true that a great deal must depend on the visibility of the boundary line between walls and ceiling. In this room, for instance, the ceiling appears to me rather low because of the obvious boundary between the light ceiling and the dark walls. On the other hand, at Piccadilly tube station, where there is a platform lit with fluorescent tube lighting, the flooding of ceiling, walls and platform with light undoubtedly gives an impression of great spaciousness in comparison with platforms without such good lighting.

MR. L. DAVIES: Mr. Allen spoke of the danger of over-strong contrasts and said that that was a fundamental rule in the application of colour. Later in the paper he referred to the colouring of machines and of the contrasting colours used for the control knobs and there he seemed to speak more of colour contrasts than of brightness contrasts. I wondered whether there was any advantage in using colour contrast instead of brightness contrast and precisely what the distinction is.

MISS BUCKLAND: In connection with the painting of machinery Mr. Allen pointed out that bright colours for connecting pipes was a good feature. If, however, a machine is the focal point in a room should it not be painted in a bright colour, and should not the pipes merge into the background? If so, why not paint the pipes the same colour as the walls, merely identifying the pipes at the flanges or ringing them, so that the machines themselves are the brightest point?

MR. WILLIAM ALLEN: Dr. Stiles' remarks about reducing the brightness of the source by increasing its area, and so on, make me feel I have not made myself clear. I suggested that if one reduced the brightness of the light source one might design for the use of dark colours without serious contrast. I did not mean to do this by an increase of the surface area, but by a more direct screening of light sources—by the design of opaque fittings in some cases—which would let light out where we wanted it to go, and not directly into our eyes. One of the rooms which I always enjoy passing through is one of the rooms in the Army and Navy Stores. In the jewellery section the lighting is provided by a series of vertical tubular fittings hanging far down from the ceiling with a light inside opening downwards and one opening upwards. The whole of the surface of the outside is covered with small mirrors which ensure that the fitting takes on the colour of the surroundings. The light upwards provides a fair distribution of light and the light downwards provides the brightness and sparkle which I suppose is essential to the sale of jewellery. Although the decoration of the room is not dark I have often thought that it could be so quite safely without anyone being conscious of it.

Dr. Stiles' reference to the additions and subtractive effects of colour reflection as factors in colour richness is obviously an additio to the explanation which was in my mind, and think it is an impor nt one.

Miss Verity suggested that light colours and dark colours al ernated in the course of history and there is, of course, evidence to sup ort her views; but I do not like the implication because it sugg s that we do not understand science colour or how to use it consc usly to reach specific objectives.

Miss Verity also pleaded for a standard in colour terminol gy. A great deal of American and English work has been done on that, though I think practice is much better established in Americ .

Mr. Monro's point about coloured services is a very real one. I liked the colours in the particular factory I mentioned because the orange colour was quite reasonably successful as an occasional relief. Obviously, however, if several services were exposed, the colour might clash. It seems to me that the B.S.S. colour code might bett r have been devised as a colour scheme which would harmonise no matter which services were put together.

One speaker asked about light floors. I am sorry to say that we do not know as much as we should about floors and I think it would be worth the speaker's while to make enquiries on this point at the Building Research Station.

I am interested to know that Dr. Wright agrees there may be a field for work on the subject of richness and texture, and I should like to accept his invitation to make specific suggestions.

His remarks on chromatic aberration and the variable eccentricity of the pupils of eyes as influencing factors in colour recessional effects are valuable in reminding us of factors which I had not sufficiently appreciated. They are obviously important and I think those of us on the "practice" side of the border would like to discuss the points at greater length some day. Perhaps this is the appropriate place to say that I should personally like to see a conference organised in which all the various colour interests, scientific, technical and æsthetic, can seriously explore the border country together.

Miss Buckland raised a point about the machines in the factory being the brightest point. Perhaps I misunderstood her, for I do not think they should be. One surely wants the brightest colours at the point of work or danger perhaps, but not all over the machines.

Mr. Davies raised the point about colour contrast and brightness contrast. It is quite possible to have a colour contrast separately or to have a colour brightness contrast by itself. It is a matter of different co-efficients of reflection, and whether the colour receptors or the light receptors alone are stimulated.

NOTES FROM THE MINUTES OF COUNCIL MEETINGS

MEETING HELD ON 9 MARCH, 1946

Appointments

Codes of Practice Committee on Weather Resisting Roof Coverings: Mr. C. M. Vine [*A.*].

Officers of the Board of Architectural Education: Chairman, Mr. A. B. Knapp-Fisher [*F.*]; vice-chairmen, Mr. Martin S. Briggs [*F.*], Mr. J. S. Walkden [*F.*], Mr. R. Gordon Brown [*A.*]; hon. secretary, Mr. Romily B. Craze [*F.*].

B.S.I. Technical Committee ME/95: Filters for Gases and Liquids: Mr. P. J. Waldram [*L.*].

B.S.I. Sub-Committee CH/18/5: Silver standards for metallic finishes: Mr. D. W. Pye [*A.*].

B.S.I. Committee B/29: Co-ordination of sequence of trade headings in specifications: Mr. Guy North [*F.*].

Public Relations Committee: Press Contacts Sub-Committee: Mr. Lionel Smith [*A.*].

Exhibition Sub-Committee: Mr. R. A. Duncan [*A.*].

Ministry of Fuel and Power: Committee on Thermal Insulation of Factory Buildings: Mr. Grenfell Baines [*A.*], Mr. George Fairweather [*F.*], Mr. P. V. Mauger [*F.*].

Management Committee: London Council for the National Registration of Plumbers: Mr. C. C. Handisyde [*A.*].

R.I.B.A. Scale of Professional Charges: Clause 4

Following the revision of Clause 7 of the scale of charges approved by the Council at their meeting on 15 January, the following consequential amendment has been approved:

Paragraph 1, line 6: *Delete* the figure "5," *insert* the figure "7."

Post-War Buildings

It was decided to set up a committee consisting of: Mr. C. G. Stillman [*F.*], Mr. J. Murray Easton [*F.*], Mr. H. M. Fairweather [*F.*], Mr. A. W. Kenyon [*F.*], Mr. Lionel Pearson [*F.*], and an official architect to be nominated.

The Committee will have power to co-opt other members as may be necessary. Its initial task will be to formulate R.I.B.A. policy in regard to post-war hospital building. Subsequently, when R.I.B.A. policy has been agreed, it is proposed to hold a joint conference with the medical authorities primarily concerned.

Value Payments

It was decided that the support of the R.I.B.A. should be given to a memorandum of a conference convened by the Association of British Chambers of Commerce on war-damaged premises, which incorporates the following resolution on Value Payments, for submission to the Chancellor of the Exchequer:

> "That the War Damage Commission and the Treasury be asked to give an assurance that in all cases in which a value payment would be payable in respect of premises that have been destroyed by enemy action, the powers contained in Section 11 of the War Damage Act 1943 should be exercised to ensure that the amount of such payments shall be increased by a sum equal to such proportion of the amount computed as provided by the Act as may compensate proprietary interests in such premises in respect of the rise in building costs since 31 March 1939."

Lutyens Memorial Fund

It was decided to make a contribution of 100 guineas to the Lutyens Memorial Fund.

Probationership of the R.I.B.A. List of Recognised Examinations

It was decided that the preliminary examination of the Royal Institute of the Architects of Ireland should be included in the list of examinations recognised for the probationership.

Southend School of Architecture

On the recommendation of the Board of Architectural Education, it was decided that recognition of the three years' full-time course in this school for exemption from the R.I.B.A. Intermediate Examination should be continued under the usual conditions.

R.I.B.A. Distinction in Town Planning

The R.I.B.A. Distinction in Town Planning has been awarded to the following members of the R.I.B.A. who are also members of the Town Planning Institute: Mr. F. R. Steele [*F.*], Mr. R. G. M. Chase [*A.*], Mr. H. V. R. Govan [*A.*], Mr. L. F. I. Wolters [*L.*].

R.I.B.A. Examinations in Belfast

A suggestion by the Royal Society of Ulster Architects that Belfast should become a permanent non-metropolitan examination centre has been accepted.

The Ashpitel Prize 1945

The Ashpitel Prize for 1945 has been awarded to Mr. Derek Fuller Wright (School of Architecture, Manchester Municipal School of Art), who obtained the highest marks in the final examination held in 1945.

Membership

The following members were elected: —

As Hon. Fellow: The Most Rev. Archbishop of Canterbury: as Fellows, 14; as Associates, 11; as Licentiates, 22.

Applications for Re-instatement

The following applications for re-instatement were approved:—

As Fellows: Herbert Humbley Archer, Edward Arnold Mitchell.

As Associates: Edward Anthony Cahill, Frank George Geary, Herbert John Whitfield Lewis, A. V. Pilichowski, Mrs. Beryl Leila Watson.

Resignations

The following resignations were accepted with regret: William Henry Ludlow, O.B.E. [*A.*], George Percy Crane [*L.*], Harry Edward Roskruge [*L.*], Abel Round [*L.*].

Retired Memberships, etc.

The following applications were approved:—

As Retired Fellow: Thomas William Turnbull Richardson.

As Retired Associate: Henry Unwin.

Obituary

The Secretary reported with regret the deaths of the following members and students:—

William Henry Overton [*F.*]. George Allen Ross [*F.*].
Joseph Louis Hampson [retd. *F.*]. Robert Heath Mew [retd. *F.*].
Edward Albert Ram [retd. *F.*]. Aston Charles Pickford [*A.*].
Mrs. Margaret Spender [*A.*]. Bertram Norman Southall [retd. *A.*].
H. V. Crawfurth Smith [*L.*]. Harry Thomas Ponsford [*L.*].
James Thomson Knox [*Student*]. Killed on active service.

MEETING HELD ON 9 APRIL, 1946

Mr. Basil M. Sullivan

The Council stood to mark their respect for Mr. Basil M. Sullivan, whose death had taken place on 30 March. Before his resignation owing to ill-health in December 1945 Mr. Sullivan had been chairman of the Board of Architectural Education and a Member of Council since March 1944.

Address by the Minister of Works

The Rt. Hon. George Tomlinson, M.P., Minister of Works, addressed the Council on the work of his Ministry and replied to a number of questions by members.

The Honorary Associateship

The Secretary reported that Sir Edward Appleton, G.B.E., K.C.B., F.R.S., secretary of the Department of Scientific and Industrial Research, had accepted nomination as an Honorary Associate.

Appointments

Ancient Monuments Board for England: Sir Banister Fletcher (Past President).

Professional Classes Aid Council: Mr. J. Alan Slater [*F.*]

Building Apprenticeship and Training Council: Mr. A. H. Moberly [*F.*]

Advisory Committee, L.C.C. Brixton School of Building: Mr. Darcy Braddell [*F.*] and Mr. A. F. B. Anderson [*F.*]

Institute of Landscape Architecture Practice Committee: Mr. A. L. Roberts (Vice-President).

Institute of Landscape Architecture Education Committee: Mr. Darcy Braddell [*F.*]

Royal Sanitary Institute Annual Congress, 1946, Blackpool: Mr. G. Noel Hill [*F.*]

Regent's Park Terraces

Approval was given to a statement of R.I.B.A. views on the future of the Regent's Park Terraces prepared by a specially-appointed Sub-Committee of the Town and Country Planning Committee for submission to the Committee recently set up by the Government to report on this matter.

R.I.B.A. Premises

The Council approved proposals for the re-allocation of accommodation within the building, one result of which will be to free the Reception Room (War-time Library) for use as a Members' Room as soon as the Library can return to its proper quarters on the third and fourth floors.

R.I.B.A. War Memorial

It was decided to set up a sub-committee consisting of Mr. J. Murray Easton (Vice-President), Mr. Grey Wornum [*F.*], Mr. H. T. Cadbury Brown [*A.*] and Mr. R. Gordon Brown [*A.*], to draw up a scheme for the commemoration of members and Students who lost their lives in the late war.

Exhibition of Premiated Designs at the R.I.B.A.

The Council approved a recommendation of the Competitions Committee and the Public Relations Committee that the premiated and commended designs in selected important competitions should be exhibited at the R.I.B.A.

International Union of Architecture

Approval in principle was given to proposals submitted by the Foreign Relations Committee concerning the creation of an International Union of Architecture, and it was agreed that the Conference which the Réunion Internationale d'Architectes are to hold in the early autumn and at which it is proposed to discuss the matter, should be held at the Institute and under R.I.B.A. patronage.

Headquarters of the United Nations Organisation

It was reported that Mr. Noel Baker, Minister of State, had informed the President that a Commission was being set up to examine and report upon the region selected for the site of the U.N.O. headquarters, and that the question of buildings would not be considered until the General Assembly (which would next meet in September) had approved this report. Meanwhile, the Minister would direct to the proper quarter the Institute's representations that the design of the buildings should be the subject of a competition. The omission of architects from the list of experts whom the Permanent Headquarters Committee of the General Assembly considered should assist the Commission had also been brought to the notice of the Minister, who had replied that the matter would be taken up with the appropriate department.

Grants

The Council approved the following list of grants for the year 1946:—

	£	s.	d.
Building Industries National Council	360	0	0
Architects' Benevolent Society	150	0	0
British Standards Institution	26	5	0
Council for the Preservation of Rural England	25	0	0
British School at Rome (Faculty of Archæology) ...	3	3	0
Sir Edwin Lutyens Memorial Fund	105	0	0
Parliamentary and Scientific Committee	26	5	0
Institute of Sociology (Mr. Mumford's visit)	21	0	0

Membership

The following members were elected:—

As Fellows: 3. As Associates: 7. As Licentiates: 19.

Election 25 June 1946

Applications for election were approved as follows:—

As Hon. Associate: 1. As Fellows: 12.
As Associates: 16. As Licentiates: 18.

Election October 1946

Applications from overseas candidates for election were approved as follows:—

As Fellow: 1. As Associates: 3.

Applications for Reinstatement

The following applications for reinstatement were approved:—

As Fellows: Robert Jamieson Troup, Gerald Soudon Bridgman.

As Associates: Francis Alfred Barley, Cyril John Bartlett, Samuel Herbert Collins, Mrs. Denise Marion Stone, Michael Calvert Sunter, Alan Tatlow.

As Licentiates: Ernest Edward Geeves, John Gould Oliver.

Resignation

The following resignation was accepted with regret:—

Harold Sudlow [*Retired F.*]

Applications for Transfer to the Retired Members' Class under Bye-law 15

The following applications for transfer to the Retired Members' Class under Bye-law 15 were approved:—

As Retired Associate: Cecil Trevithick.

As Retired Licentiate: Charles Henry Riley.

Obituary

The Secretary reported with regret the death of:—

Wilson Burdett Allison [*F.*] George Edwards, J.P. [*Retired F.*]
John MacIntosh Lyle, R.C.A. [*Retired F.*] Joseph Boyd [*L.*]
William Alfred Masters Fiddaman [*A.*] Harold Dalton [*L.*]
John Garfield Hinton [*A.*] John Charles Paton [*A.*]
Fred Ratcliff [*A.*] William Harold Eve [*L.*]
John Edmund Fearn [*L.*] Harold Edward Gelder [*L.*]
Oliver Parker [*L.*] Edgar Felix Ware [*L.*]

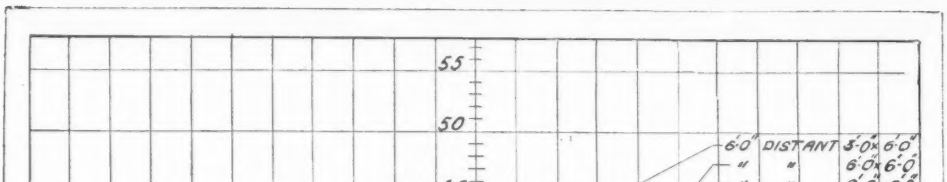


Fig. 1

THE APPROXIMATE MEASUREMENT OF DAYLIGHT

PERCY J. WALDRAM, F.S.I.

General building work in this country will long remain forbidden until heavy arrears have been made up in the repair of bomb-damage, the provision of myriads of dwellings and the erection of the huge numbers of new schools necessitated by educational reforms. The design of every one of these buildings must, however, await approval before permission can be obtained for the expenditure upon it of strictly rationed labour and materials ; and there can be no doubt that any uncertainty in the official regulations as to strength, workmanship, etc., and more especially with regard to the official specification of functional requirements will inevitably cause hesitation and delay where the utmost expedition is essential.

Of all the factors which affect and determine design none does so to a greater extent and more irrevocably than the provision for natural lighting, and with regard to this the official regulations so far published are by no means satisfactory. Where standards of functional requirements should be specified accurately in precise and familiar units of measurement they are expressed in terms so ambiguous as to leave the architect guessing over vital features in design. Where official instructions, methods and data to be used in connection with such standards should be sufficiently wide to cover the infinite variety of circumstances likely to be met with in practice they are inadequate for quite ordinary conditions. Even, therefore, if there were no ambiguity the architect is called upon for a number of unfamiliar calculations. For these he requires simple practical methods, not necessarily scientifically perfect, but sufficiently accurate to preclude material error.

Daylight Factor or Sky Factor

To deal first with the important matter of ambiguity.

The basis of adequacy as officially specified is the daylight factor, a term which is quite new and unfamiliar to the majority of architects. As representing the measured indoor light expressed as a ratio of the light subsisting simultaneously outdoors the daylight factor consists mainly, in fact almost entirely, of :—

(*a*) Light received direct from unobstructed sky visible through windows (known as the sky factor), and partly of

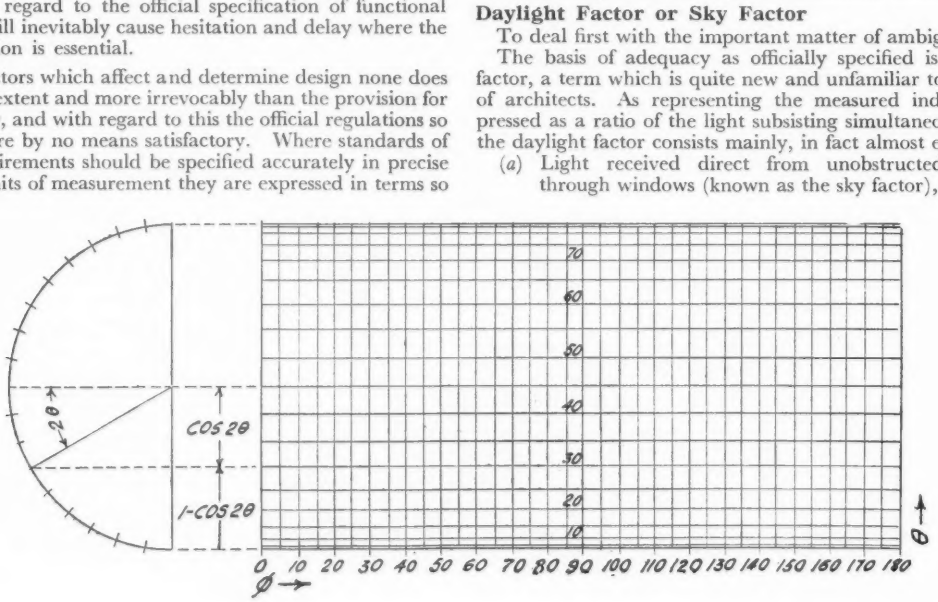


Fig. 2

(*b*) Light diffusely reflected from walls, ceiling, furniture, etc., [illegible]

(*c*) Light which is lost in passage through clean or dirty glass.

The customary practice in connection with pre-war disputes over legal rights of light was to assume that the very small and uncertain contribution and deduction by items *b* and *c* cancelled each other, which they generally do. This enabled consideration to be concentrated upon the predominant sky factor (*a*), which is precise and measurable.

A detailed official report on the lighting of buildings published for the guidance of designers recommended several new approximate methods of measuring daylight factors to avoid the use of the exact measuring diagram previously recommended officially and hitherto in general use. As all these approximations can only measure sky factors it would appear to be the official intention to make the usual assumption and to treat sky factors and daylight factors as being identical. Some tables of measured data of window efficiencies prepared by the D.S.I.R. are, however, quoted and recommended for use, and in the preface to these it is stated that a deduction of 20 per cent. has been made from the calculated values to allow for moderately dirty glass; whilst a quoted formula clearly shows that these calculated values are sky factors. This suggests, although it does not actually state, that the daylight factor is regarded as 80 per cent. of the sky factor.

A Code of Practice on natural lighting published under the ægis of the Ministry of Works is still in draft, but No. 39 of the statutory regulations of the Minister of Education specifically requires minima of natural lighting in designs for new schools in terms of daylight factors. As no allowances for diffused light and/or glass absorbtion are specified the architect is left in doubt as to whether to design for a daylight factor equal to the sky factor, or 20 per cent. less. This is a matter of no small importance, because the invariable problem in practical fenestration is not, as assumed in the Lighting Report, as to what window dimensions should be specified in a given case, but as to what depth of adequately lit interior can be planned behind a window or windows, obstructed or unobstructed, taken up as near as possible to a ceiling whose position is fixed by practicable storey heights. Depth of adequate lighting is determined by the position of the official minimum on a graph or section of the daylight factor values between the window wall and the back wall. These values drop very considerably, often a hundredfold or more, although no material difference may be observable to the naked eye. In the vital neighbourhood of the back wall the curve of values is generally very flat, and variation of the essential minimum by 20 per cent. can alter very materially its position on the curve and, therefore, the permissible depth of room which will or will not comply with the Regulations. It may be a physical impossibility for subsequent users of the room to know whether the regulations have been followed or disobeyed, but that is a matter which no longer concerns the architect responsible for providing the scientific fenestration which has been prescribed for him.

The new official standards represent an increase in pre-war practice which is little short of colossal, but it is no part of the duty of architects to question them. They may be necessary or only merely desirable; they may be proven functional requirements or uninformed impracticable guesswork; they may represent common sense or fantastic extravagance. In view of the experience of some adults who find reading out-of-doors distressing, they may even be harmful. When once they have been promulgated by the Minister of Works and the Minister of Education they will have to be obeyed; but unless and until the ambiguity referred to is removed, as by a Ministerial direction that the term daylight factor should be interpreted as representing measured sky factor with or without specified additions or deductions, it is not obvious how the regulations can possibly be obeyed with any degree of precision.

It would be desirable at the same time to specify the plane on which the sky factor is to be measured. This was standardised internationally in 1929 at 2 ft. 9 in. (84 cm.) above the floor; but it might well be less for infant class-rooms, and thus increase the depth of class-room officially permissible.

Limited Scope of Official Directions

Before proceeding to the more congenial task of endeavouring to supplement the efforts of the Ministry of Works to assist the designer in the application of new standards, whatever they may be, it is necessary to note the present very limited scope of the official directions.

They are based upon the report on the Lighting of Buildings by a Committee appointed by the Building Research Station of the D.S.I.R. which constitutes No. 12 in the well-known series of official Post-war Building Studies, together with the tabulated

Strip	Distance in feet	Tan θ	θ	2θ	cos 2θ	1-cos 2θ	ϕ	$\frac{\phi}{7.2}$	$\frac{\phi(1-\cos 2\theta}{7.2}$
Six Windows 3 ft. Wide by 8 ft. High.									
a	20. 0	0.400	21°48′	43°36′	0.7242	0.2758	9°	1.25	0.345
b	20.16	0.398	21°42′	43°24′	0.7266	0.2734	8.5°	1.18	0.323
c	20. 7	0.386	21° 6′	42°12′	0.7408	0.2592	8°	1.11	0.290
d	23. 0	0.347	19° 6′	38°12′	0.7859	0.2141	6.5°	0.903	0.193
e	24. 6	0.323	17°54′	35°48′	0.8111	0.1889	5°	0.694	0.131
f	26. 5	0.301	16°42′	33°24′	0.8348	0.1652	4°	0.555	0.091
									1.373
								10%	0.137
									1.236
Two Windows 9 ft. Wide and 6 ft. High.									
abc	20.16	0.398	21°42′	43°24′	0.7266	0.2734	25.5°	3.54	0.972
def	24. 6	0.323	17°54	35°48′	0.8111	0.1889	15.5°	2.152	.405
									1.377
								10%	.138
									1.239
Half of One Window 36 ft. Wide by 8 ft. High.									
abcdef	21. 7	0.368	20°12′	40°24′	0.7615	0.2385	41°	5.692	1.360
								10%	.136
									1.224

data, prepared by the National Physical Laboratory, of the measured depths and widths to which windows of different sizes, obstructed and unobstructed, will secure the penetration of different daylight factor values specified as functional requirements.

Opinions may differ as to the accuracy of the National Physical Laboratory data of obstructed windows, in connection with which examples of obvious anomalies cited in the JOURNAL R.I.B.A. of November 1944 so far remain unexplained; but there can be no doubt as to the paralysing limitations of the Tables. Not only are they limited to windows with an effective height of 6 ft., which is clearly insufficient for many ordinary purposes, such as school class-rooms, but they are confined to the performance of single windows acting alone.

An article in the JOURNAL R.I.B.A. of November 1945 certainly suggested an assumption by means of which the data in the Tables could be applied without serious error to multiple windows mutually reinforcing each other; but the original limitation does not make for confidence in the ability of scientists to appreciate the practical problems of the architect, or justify rigid scientific directions to architects in respect of a branch of their work in which they have, in the past, amply proved their ability to achieve excellent results when protected from excessive external obstructions outside their control.

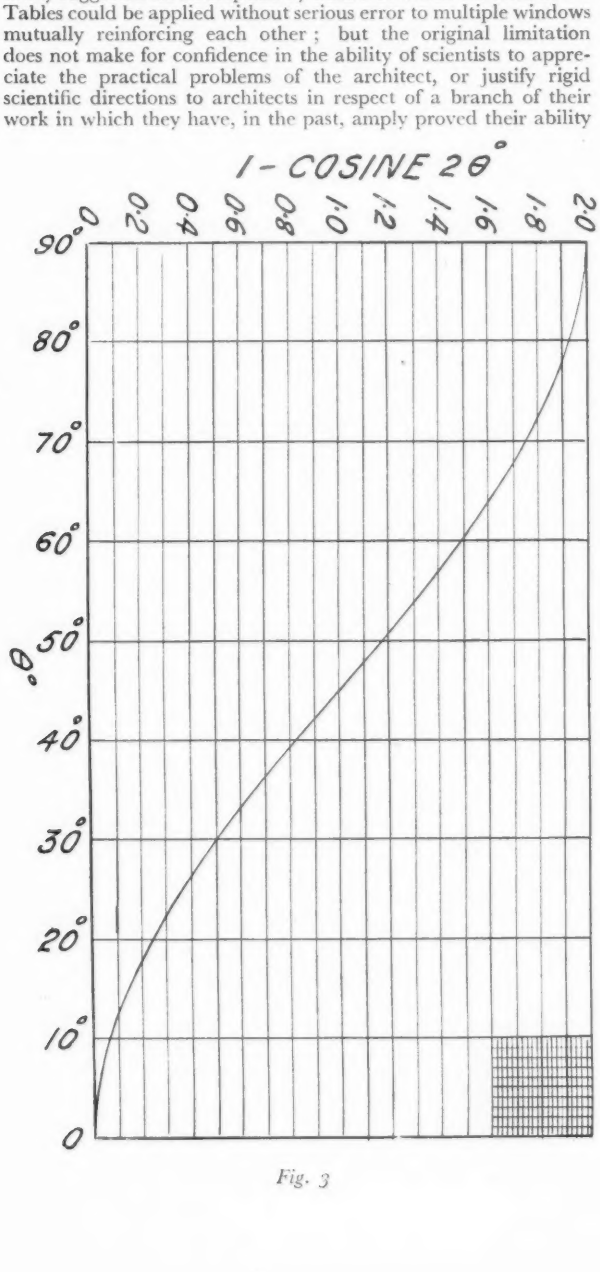


Fig. 3

Permissible Approximations

The labour-saving devices described and recommended in the Lighting Report as substitutes for the rectangular measuring diagram are essentially approximate in that they purport to give the lighting capacity of windows per foot of width. Theoretically this is impossible except with windows having all parts equidistant on plan from the point illuminated, as when situated in a wall appropriately curved on plan, and even then as to only one point illuminated. Approximation is tacitly admitted by the limitation of any claim for accuracy to narrow windows; but in the absence of any definition of narrowness and of any indication whatever of the theoretical basis of any of the devices the architect is given no opportunity of ascertaining how far the inherent approximation may be taken safely without risk of material error. Fortunately, the discredited rectangular measuring diagram affords a ready means of appraising the extent of error involved, and at the same time it at once suggests a very simple formula, which is as easy to apply to any practical problem as any of the new devices in the Report, if not easier, and involves only the same degree of approximation as that which their recommendation licenses.

The projection of a rectangular window, all parts of which are equi-distant from the centre of projection, on to the rectangular measuring diagram of angular co-ordinates (Fig. 2), is itself a rectangle. If, however, the window were in an ordinary straight wall the projection becomes a quadrilateral with the top curving downwards from the centre towards the sides as the angles of elevation decrease with the increase of distance from the point of projection between the centre and the sides.

The sky factor value at the point of projection being measured by the area of the projection divided by the area of a projection of a complete hemisphere of sky, the only error involved is the difference in area between a rectangle and a quadrilateral with a downward curving top.

Fig. 1 indicates by firm and dotted lines the true and the approximate projections of three unobstructed windows, all 6 ft. high, and 3 ft., 6 ft. and 9 ft. wide respectively from points 6 ft., 9 ft. and 12 ft. distant from the centre line of the windows and situated on a horizontal plane at sill level. These indicate eloquently the nature of the error involved by the assumption that the area of the projection is the lateral co-ordinate multiplied by the central vertical co-ordinate instead of by the true mean of all the vertical co-ordinates.

On the projection of narrow windows it is clearly immaterial, in fact scarcely measurable, especially at the comparatively low values of daylight factor with which the designer is concerned. Even with quite wide windows it can be reduced to negligible proportions by dividing the width into convenient narrow strips, each treated as a separate window. This somewhat laborious process is, however, only one method of ascertaining the mean vertical co-ordinate of a quadrilateral projection with a drooping top. It should give the same result as obtaining the projected area by multiplying the co-ordinate of the sum of the lateral strips by the co-ordinate of the mean vertical angle, the position of which on plan can generally be readily fixed with substantial accuracy.

Approximate Formula

The new official labour-saving devices recommended are all clearly based on the assumption of rectangular projections. The fact of the dimensions of such rectangles being easily measurable as angular co-ordinates suggests some simple formula to represent the product of the vertical and horizontal co-ordinates divided by the area of the rectangular diagram of angular co-ordinates representing the complete hemisphere of sky between the horizon and the zenith. Such a formula should render unnecessary the labour of setting out and measuring on the rectangular diagram in at least the ordinary straightforward problems in practical fenestration which the official methods were devised to solve.

From Fig. 2 indicating the geometrical setting out of a rect-

angular measuring diagram of the quarter sphere of sky which illuminates any unobstructed window it will be seen that the co-ordinates of the 180 deg. of lateral angles (ϕ) are equally spaced whilst the co-ordinates of the 90 deg. of vertical angles (θ) are proportional to $1-\cos 2\theta$.

If the diagram for a quarter sphere of sky be set out to the customary convenient dimensions of 20 in. by 10 in.=200 square inches out of 400 for a complete hemisphere, the co-ordinate of each degree of lateral angle will be $\frac{20''}{180°}=\frac{1''}{9}$ or co-ordinate of bearing in inches$=\frac{\phi°}{9}$

The length in inches of co-ordinates of vertical angles (θ) up to 45 deg. is clearly 5 ($1-\cos 2\theta$). Mathematically this holds good also for vertical angles between 45 deg. and 90 deg., but those who find mentally indigestible the apparent paradox of values of $1-\cos 2\theta$ being greater than unity can adopt the more obvious form of $10-[5\ \{1-\cos 2\ (90-\theta)\}]$ for those angles. The appropriate values can be calculated once for all and listed or preferably graphed as in Fig. 3 for insertion into the formula as and when required.

The sky factor value being the area of the rectangle $\div$ 400 the approximate formula takes the very simple form of

$$\text{sky factor} = \frac{\phi \times 5\ (1-\cos 2\ \theta)}{9 \times 400} \quad \text{or sky factor } \% = \frac{\phi\ (1-\cos 2\ \theta)}{7{\cdot}2}$$

The deduction and analysis of this formula was suggested by a publication, "The Heating, Ventilation and Lighting of School Buildings" by W. Douglas Seymour (Oxford University Press) in which it is given as representing daylight factor instead of sky factor per cent. and without any information as to its origin or the extent of approximation which it involves.

As an example of the facility with which it will deal with multiple windows and the continuous horizontal obstruction represented by degrees of permissible obstruction under town planning regulations, consider the first floor class-room shown in Fig. 4 and let it be necessary to ascertain what sky factor value is enjoyed on the worst desk :

(*a*) when the windows face virtually unobstructed playground and

(*b*) when they face a suburban locality subject to a town planning restriction of 40 feet maximum height and 26½ deg. maximum obstruction. (2 to 1).

The windows shown are conveniently divisible laterally into strips of clear glass 3 ft. wide and the transome bars shown necessitate a deduction of 10 per cent. if the windows are calculated for a height of 8 ft. The lateral angles (ϕ) are measured on plan with a protractor and the angle of elevation (θ) of the window head at the centre of each strip as indicated for the farthest strip. It is only possible, however, to measure angles on a drawing with an ordinary protractor to about half a degree and the vital angles of elevation can quickly be ascertained more accurately by scaling the distance from the point of projection to the centre of the window, dividing this into the window height and using a table of trigonometrical tangents. The following tabulated calculations are taken to three places of decimals in order to test the accuracy of the assumption that the error involved by applying the formula to wide windows can be reduced or eliminated as efficiently by measuring the vertical angle θ at its mean position as by dividing the window into narrow strips treated separately.

For ordinary problems on fenestration such precision is, of course, quite unnecessary. The values of $1-\cos 2\ \theta$ would be taken from a tabulation or large scale graph; and for many of such problems the designer would not require to use even the approximate formula if he had access to a set of "position graphs" such as illustrated in the R.I.B.A. JOURNAL of March 1944 and the *Builder* of 29 September 1944. Also most practical problems with regard to unobstructed windows can be solved direct by graphs as illustrated in the R.I.B.A. JOURNAL of November 1945 showing the distances at which windows of different heights and widths will supply 0.2 per cent. and 0.5 per cent. sky factor at sill level.

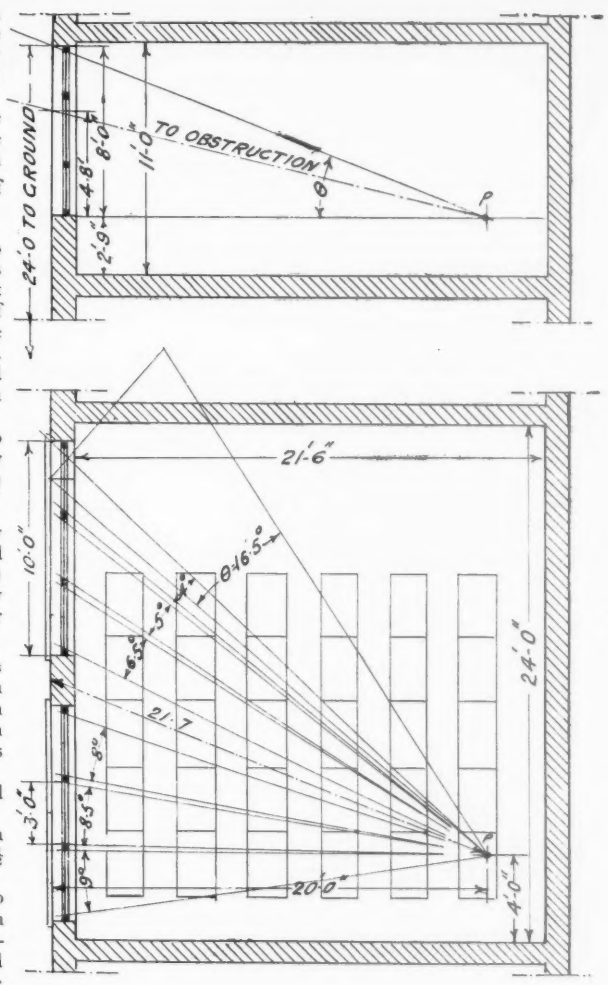


Fig. 4

As regards the multiple windows shown, which constitute a fairly severe test, there is obviously little or nothing to choose between these three methods of eliminating the inaccuracy inherent in the formula by using the approximate mean in place of the maximum co-ordinate of the angle of elevation of the head. As would be expected the division into two comparatively wide windows treated separately gives a slightly higher result than the more accurate division into strips 3 ft. wide, and the treatment as a half window of twice the aggregate width of all the strips, with the vertical angle measured at a point approximately midway between the centre and the side, which disregards the slightly steeper rate of droop towards the sides, is a little too low. The differences, however, are extremely small and of no practical importance. From Fig. 5 showing the windows projected on to a theoretically accurate rectangular diagram, it will be obvious that if this be set out to the customary dimensions of 20 in. by 10 in., upon which 1 per cent. sky ratio would be represented by 4 square inches of projected area, the setting out and measurement of areas would need to be very precise indeed for the accuracy of results of the order of 1 per cent. to 2 per cent. sky factor or less to be relied upon to three places of decimals or $\frac{1}{1000}$.

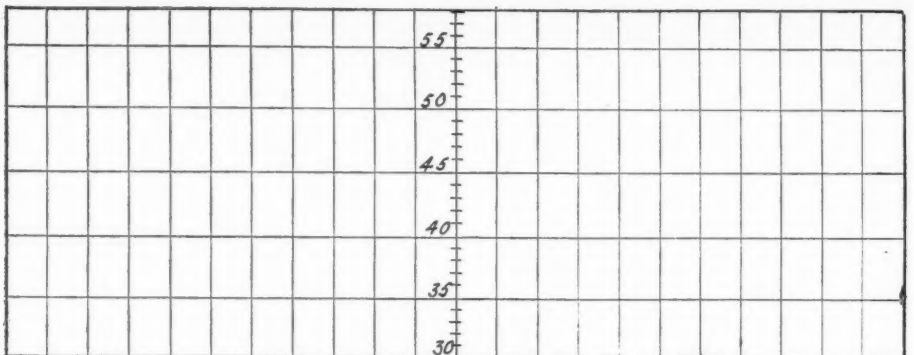


Fig 5

In view of the fact that such setting out would require skilled draughtsmen, possessing and experienced in the use of an accurate planimeter—a delicate instrument very liable to injury—in addition to the difficulty of checking a lengthy operation presenting many opportunities of personal error, it may be assumed that the formula is, in practice, even more accurate than the rectangular diagram, provided that the vertical angle (θ) is measured at the position of its approximate mean value.

Obstructed Windows

Fig. 6 indicates the method of obtaining the sky factor obtainable from the obstructed windows. It is obviously that obtainable from unobstructed windows less that contributed by so much of the windows as is obstructed when viewed from the worst desk, i.e., windows of a height hy.

The dimension hy. can be scaled, but a simple calculation is quicker and more exact. In accordance with the property of similar triangles

$$100 : 24 : : 20 : \text{hy, or hy} = \frac{480}{100} = 4.8$$

If the calculations for a window 8 ft. high be repeated for one 4.8 feet high a value of about 0.53 per cent. sky factor should result. A speedier method is to reduce the calculated sky factor value of the unobstructed window in the proportion of the mean ordinates of windows 8 feet and 4.8 feet high.

The tangent of the angle θ subtended at 21.7 feet by a window 4.8 feet high is $\tan\theta = \frac{4.8}{21.7} = 0.22$ or $\theta = 12°24'$. Cos $24°.48'$ $= 0.907$. The ordinate 1-cos 2θ is therefore 0.093 as against 0.2385 for the window 8 feet high. The sky factor value required is therefore $1.36 \times \frac{0.093}{0.2385} = 0.528\%$. The net sky factor obtainable from the obstructed window is therefore $1.36 - 0.53 = 0.83$ less $10\% = 0.75$ sky factor %.

The ability to consider multiple windows accurately as a single window or half window of the same aggregate width is valuable, not only as reducing labour, time and the possibilities of error, but more particularly as enabling the formula to determine in one simple operation what height for a given width and what width for a given height will enable a given sky factor value to be obtained. Presume, for example, it were desired to ascertain what storey height would be required to enable the class-room shown to comply with the Statutory Regulation No. 39 of the Ministry of Education, which requires a minimum of 2 per cent. daylight factor, presumably on the worst lit desk at sill level.

The height, floor to ceiling, would be the window height plus 2 ft. 9 in. floor to sill, plus 3 in. window head to ceiling. The sky factor required would be at least 2.2 per cent. to allow for the 10 per cent. obstruction by transome bars, without any allowance comparable with the 20 per cent. in the official tables for moderately dirty glass.

Treating the windows shown as one half of a window 36 ft. wide with $\phi = 41°$, $\frac{\phi}{7.2} = 5.692$ as before and 1-cos $2\theta = \frac{2.2}{5.692} = 0.386$

Cos $2\theta = 0.614$, $2\theta = 52°$, $\theta = 26°$, $\tan\theta = 0.488$.

The window height required is $21.7 \times 0.488 = 10.61$. Adding 10 per cent. for transomes, 3 in. head to ceiling, and 2 ft. 9 in. floor to sill, the height floor to ceiling is 14.61, say 14 ft. 8 in., and the storey height floor to floor is about 15 ft. 8 in. for windows totally unobstructed ; and, of course, more if either facing or liable to face even very moderate obstruction.

Bilateral lighting will not assist the worst desks in multi-storey buildings because of the obstruction of the essential corridor on the floor above.

From this it will be obvious that under Regulation No. 39 multi-storey urban schools will not be a practicable proposition even if relegated to open outer suburbs, which are often inconveniently distant from industrial residential areas.

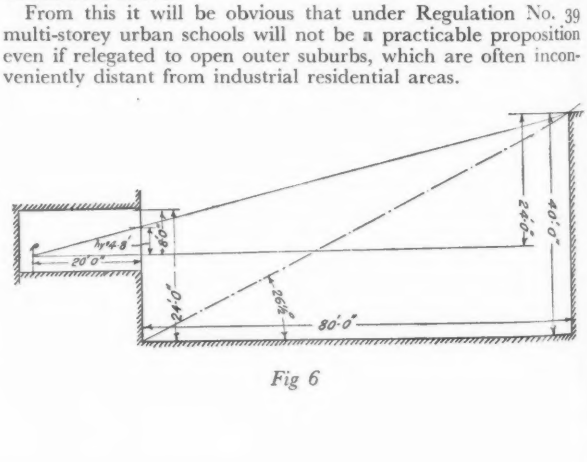


Fig 6

THE PLANNING AND EQUIPMENT OF SPECIAL LIBRARIES

Conference at the R.I.B.A.

On Saturday, 6 April, the Association of Special Libraries and Information Bureaux (A.S.L.I.B.) organised a most successful all-day conference in the R.I.B.A. Henry Jarvis Meeting Room to discuss the planning and equipment of special libraries.

In past years both architects and librarians have discussed public library design as if it were the only library building problem, and both here and in America books have been published and papers written sufficient to give a public library architect guidance in almost every theoretical and practical problem. The design of special libraries has been neglected, largely because until recent years the only special libraries of much consequence have been in universities, learned societies, and in the departments of national museums and libraries, where there has been overmuch readiness by both librarians and architects to accept the universal validity of the old "collegiate" plan. Essential theoretical problems have not been worked out and, indeed, have too seldom even been posed, owing to the general conservatism of library technique in the old-established specialist fields.

The war helped, by its vast and almost violent demands on research services, to throw the whole question of library services into the foreground. A research or special library is seldom just a collection of "special" books: it is the intelligence centre and information room of an intricate campaign in science and industry and culture and must be designed accordingly. The great research associations of Britain have all been instructed to develop their work, including their library's services, the universities have increased responsibilities and more money from the University Grants Committee: so that the libraries problem is far from "academic" in the bad sense.

The A.S.L.I.B. conference was attended by about 170 librarians from all over Britain, about three-quarters being from industry and the rest from universities. The morning session was on University Libraries when, with Mr. G. Woledge, Librarian of the London School of Economics, in the chair, Mr. K. Povey, M.A., F.L.A., University Librarian, Liverpool, Dr. W. Bonser, Birmingham University Librarian, and Mr. V. O. Rees [*F.*] read papers on various aspects of the university library problem. Mr. Rees is architect for the new Birmingham University Library.

In the afternoon, under Mr. J. Murray Easton's chairmanship, Mr. B. Fullman, B.Sc., A.P.I.C., Information Officer of the British Non-Ferrous Metals Research Association, read a paper on the building and equipment needs of research organisations and industrial concerns, and Mr. E. Carter, R.I.B.A. Librarian, contributed some notes following up a paper on the subject which he had contributed to the Autumn A.S.L.I.B. Conference.

The following are extracts from the papers by Mr. Fullman and Mr. Rees.

Mr. Fullman's Paper

Mr. Fullman said his paper had been prepared at very short notice. When asked to do it he at once examined all the reports of the A.S.L.I.B. Conferences. To his great surprise he found that until the 1945 (20th) Conference very little mention had been made of it. However, last year two very informative papers appeared: (1) "The Planning and Equipment of Research Libraries and Information Bureaux" by E. J. Carter and (2) "Some Notes on the Planning of Research Libraries" by S. R. Pierce [*F.*] These two papers and the discussion on them deserved careful study: the present contribution was really supplementary to them.

He said he would make fairly frequent reference to Carter's excellent paper, but was himself looking at the subject from a rather different point of view. He was thinking of a library in an establishment where *laboratory* work was carried on, or alternatively, some field work of a practical nature, the point being to relate the operations of workers of this kind to a library (or rather perhaps "information department") which would best serve their needs. He hastened to add that there was no question of invidious comparisons. This kind of library was no better and no worse than any other kind but its activities were differently accented and it had to perform certain functions which did not fall to the lot of libraries in other establishments.

His own contribution on the subject of equipment could be found in (1) *A.S.L.I.B. Report of Proceedings of the Twentieth Conference 1945*, pp. 64-74; (2) *Ibid.*, pp. 73-75.

Discussion on both papers (*Ibid.*, pp. 75-76), had been rather disappointing. Equipment had been dealt with very usefully last year and had been the subject of frequent discussion elsewhere. He was therefore restricting himself to points strictly germane to his own purpose, not attempting to deal with large-scale mechanical devices. He had no personal experience of them and in any case they were far beyond the financial means of most of the people to whom his paper was addressed.

Introduction

Mr. Fullman continued: "A library in a research organisation or industrial concern is an information centre. Keeping this objective firmly in view, the information officer or librarian should formulate his requirements as clearly as possible and co-operate with the architect in solving the problems involved."

"Such a library should be as pleasant and attractive as possible, human beings being stimulated by surroundings having architectural grace and beauty. It must, however, be borne in mind that libraries of the kind under discussion are often of relatively small size. I am all for giving the librarian plenty of elbow room. In a research or industrial organisation the librarian is competing for space with a large number of other deserving people, and he can rarely expect to obtain vast and lofty halls. Moreover, all too frequently research and industrial organisations (especially at this time) go into ready-made buildings."

In the following notes he therefore proposed to give a broad outline, based on experience, of general principles and practice, in the hope that it might be found applicable to a wide variety of cases.

Purpose

He would treat the library as an information department. It was the repository of the organisation's literature and information (published and internal); the reading room and lending library; the centre for receipt of enquiries, dissemination of information, distribution of reports, and so forth. It would be seen that he was giving it the widest possible scope, but this involved no exaggeration as many such libraries were performing all the functions mentioned.

Location

"The library should be easily accessible to its clientele, for frequent visits by the users are to the advantage of all concerned. In a research or industrial organisation, an information department or library which is not in frequent direct contact with its users is living in a vacuum. The officer in charge cannot possibly be fully aware of all the needs of his establishment unless his customers visit him frequently and tell him just what they want. After long experience I am more and more convinced that regular contacts of this kind are not only invaluable but absolutely necessary."

In a small organisation there was no trouble about accessibility, but in a large one (perhaps involving many buildings and long distances) the story was very different. The problem of the exact position of the library in a large and perhaps scattered organisation had no ideal solution, but every case must be considered on its merits, to provide the best service to the people most concerned. He was firmly convinced that as a general

principle the library should be the repository of all books, literature, etc., but in the case of large and scattered organisations there was a case for forming small special outlier collections in remote departments.

Noise and Other Disturbances

People varied a good deal in the amount of noise they could tolerate. The French author Proust worked in a special noise-proof room. On the other hand, there were various large special libraries situated on main London roads. He had a suspicion, however, that even where readers seem to be quite comfortable in such cases, they must at some level of consciousness be devoting some energy to counteracting the effects of the noise. If possible libraries should be kept away from busy main roads. More particularly it was necessary to avoid parts of an organisation where noisy operations were in progress. Sometimes, after a noisy location had been chosen, efforts were made to obviate the trouble by various remedial measures. Whatever the success achieved, it was obviously less costly and more satisfactory to avoid the necessity for such action. Mr. Fullman remembered a university department which was located on a tram route: the noise made life impossible, so the windows were doubled. Life was still impossible and when he last saw the building it was empty.

Noise was not the only difficulty. Vibration from machinery might well be a nuisance; fumes from chemical operations could be extremely unpleasant; and no doubt other examples would occur to his audience. We lived in a very complicated world, where research and industrial establishments carried out all sorts of strange operations and contained fearful and wonderful apparatus and plant. In every case, the location of the library must be considered in the light of all work in progress in the vicinity.

"The library should *not* be located under a chemical laboratory or other place where large quantities of liquids are run to waste. Theoretically, such a laboratory could be so planned that the risk of flooding is negligible. In practice, in my own knowledge two libraries thus situated in research establishments have been flooded, one of them repeatedly; these establishments were built in 1938 and 1940 respectively, and both were planned by able architects backed by first-class scientific advice. This is not a reflection on the architects. I am reluctantly driven to the conclusion that a laboratory worker who really gives his mind to it can defeat the plans of any architect."

Weight on Library Flooring

"This is an obvious consideration to bear in mind. Books and papers in quantity are extremely heavy. Carter, in his paper mentioned above, estimates that 1,000 books of mixed sizes weigh 18 cwt. In the discussion on this same paper A. E. Cummins, Librarian of the Chemical Society, thought that Carter's estimate was too low, and suggested that for special libraries with large periodical holdings this figure should at least be doubled, i.e., 1 ton 16 cwt."

"My experience is that if cracks appear in structures anywhere near a library, it is always the library that is blamed; on the other hand I do not remember hearing of any disasters. It would be wise (whether a new building or an old one is in question) to have this matter thoroughly argued out in each case."

General Layout

He was treating the library as an information department. What were we to cater for in it? There were such matters as storage of literature and documents (including confidential or secret documents), quiet places for abstracting, translating, cataloguing, etc.; places for telephone conversations and interviews; facilities for reading microfilms; perhaps apparatus for photographic reproduction of documents.

He had already indicated one reason for attracting readers to the library. There were others. If readers came frequently, routing of journals would be cut down, loaned material was taken away directly, and in other ways the burden on the assistants (who as a class were usually overworked, and sometimes treated without much consideration) was reduced. The library should therefore be made as attractive and comfortable as possible.

In the general layout various factors must be kept in mind: (*a*) Space—always at a premium; (*b*) lighting; (*c*) reduction of physical work in taking out and replacing material; (*d*) places for librarians and readers.

Space

For years to come, the effects of the war would reduce available space to a minimum; added to this was the great and increasing volume of literature on all subjects. Every inch of accommodation should be used to the best advantage, and all possible wall space should be used for shelving or other storage. In addition, where sufficient width was available, book stacks might be brought out from the walls, which, apart from providing extra shelving, divided the library into individual spaces closed or partly closed on three sides. This gave a certain amount of privacy and slightly reduced noises arising in the library.

Confidential and Secret Material

Many libraries now contained confidential or secret documents, which must be segregated from published or other non-confidential material. If the quantity was small, it could easily be accommodated in a suitable locked receptacle. In places which were under constant observation by the librarians, "restricted" or unimportant confidential material need not necessarily be locked up, though it should be segregated. In some places (such as Government establishments) the amount of confidential or secret material might be so large as to need storage in a separate room which could be locked (and a separate confidential and/or secret catalogue must be provided).

Lighting

All knew from personal experience how irritating bad light could be. Available natural light being used to the best possible advantage, great care should be taken in the choice and installation of artificial light. Fluorescent strip lighting is now the subject of much interest but he could not speak of it from his own knowledge. In a large library expert advice should be sought in regard to lighting.

Materials for Shelving and Furniture

He was quite open-minded on the subject of wooden or steel shelving or furniture, each of which possessed various advantages. Carter had, however, pointed out that in the case of *shelving* the use of steel was not necessarily advantageous from the point of view of fire.

"In view of the current shortage of materials, the use of alternatives to the present conventional ones is worth considering. I have been wondering if some use might not be made of aluminium or its light alloys. This suggestion is merely a case of thinking out loud. I have not considered the matter in detail, but it deserves exploration. For library furniture these light materials would have the advantage of easy transportability. Perhaps also there are other materials that might help."

Shelving

"All shelving should be adjustable, not fixed. At this time of day it might be thought that this could be taken for granted; but there still are obstructionist views."

"As I have mentioned, wall space should as far as possible be devoted to shelving. On a high wall this would make the upper shelves inaccessible to people standing on the floor. This difficulty can be met by using a ladder (for example, one which can be fitted into a rack running along the shelving at a suitable height, so that the ladder can easily be slid along. Incidentally ladders are a case where lightness is a great advantage). If the library is high enough, a gallery can be provided. Even if these measures are taken, the situation might be further eased by arranging all books, journals, etc., which are in constant use on shelves which can be conveniently reached from the floor (say at a height not more than 7 ft. from the ground); the higher shelves can be used for material required infrequently.

Work is always facilitated, alike for library staff and users, if the material in fairly common use can be easily reached from floor level without scrambling up ladders. Regular users of libraries like to browse about by themselves, and such an arrangement helps them (thus taking the strain off the librarian)."

TABLES

Mr. Fullman had no special views on this subject. A good library plan permitted stacks which gave large bays, and a long table running down each reader's bay, thus giving the maximum amount of seating—an important consideration in a small but busy library. Large tables were helpful in bays where ponderous tomes of abstract journals were being consulted. Some people would no doubt prefer small tables for individual reading.

CATALOGUE CARD CABINETS

"The size of card used depends entirely on the amount of information to put on it. In my own case this is reduced to a minimum, and my organisation use 5 in. by 3 in. cards. Many people use larger ones (this may be necessary if, for example, abstracts are put on the cards). The cabinets formed by stacking up layers of drawers should be placed on stands of such height that the top and bottom layers may easily be read without craning or stooping. Cards at awkward heights (high or low) cause discomfort to the user, and in this as in other matters comfort and convenience make for efficiency."

"Cards should be arranged in the drawers in such quantities that they are easily pushed back for reading. Nothing is so annoying as a drawer which is so chock full that the cards are immovable; also, it incites readers to take cards out of the drawers, which in any self-respecting library is a sin against the light. The method of fixing cards in drawers by a rod passing through the cards certainly prevents the removal of cards by anybody except a hardened criminal. My own association keep cards loose (without a rod) and never have any trouble; this method is probably quite safe in a library which is under constant supervision. Small cabinets (two or four drawers, etc.) should be provided for special small indexes and other purposes (*e.g.*, trade name indexes)."

EXHIBITION OF CURRENT JOURNALS AND RECENT ACCESSIONS

"The most useful arrangement for journals is some racking system in which a whole year's issues of journals are kept together, the current one at the top. At the Patent Office Library this is done in boxes arranged in stacks round the readers' tables. The Science Library has racks against the wall. I have also seen some very convenient transportable cabinets with open sides and sloping tops. The year's issues are kept in racks in the open sides, and the current copy on the sloping top. The sloping top (two slopes touching along the cabinet's length) permits of using both the back and front of the cabinet while (owing to the slopes) reducing the width."

"If cabinets of racks are not available, it might be possible to construct easily and cheaply some device with two sloping sides, to be fitted along the middle of the length of a table. Current journals could be placed along the sloping sides and thus could easily be arranged and exhibited without waste of table space. A suitable rack or other device could be used for exhibiting new books and other accessions which might be of general interest."

STORAGE OF PAMPHLETS

"My own association used flap-lidded boxes, with a short leather strap to pull them off the shelves. Boxes of several sizes area available."

SPECIAL ROOMS

"The main library of a research or industrial establishment will naturally be used for general reading, as all the necessary material is within easy reach. In such a place it is difficult and probably rather unfair to impose a silence rule; users sometimes like to argue their difficulties out over the literature and this should be encouraged as long as conversation is at a quiet level. Even so, rooms are required for such work as cataloguing, abstracting, indexing, translating, interviewing visitors, dictating letters, typing and so on, in order that staff can work undisturbed or without disturbing readers. Such rooms should be easily accessible from the main library, and in some cases preferably opening into it."

TELEPHONES

"I receive numerous enquiries by telephone. My telephone voice is (I regret to say) very loud and for both my own privacy and the comfort of my colleagues it is desirable that I should be segregated in a separate room. On the other hand, any of my enquiries might make it necessary for me to consult something in the library, which must therefore be closely accessible to me if my caller's time is not to be wasted. While some separate rooms are thus necessary, close and easy access to the main library is absolutely necessary for efficient information work. An information officer who lives entirely in his private room (however grandly furnished) and rarely enters the library can become very rarified indeed."

"A library of this kind *must* have a sufficient supply of telephones. On the other hand, telephone bells and telephone conversations are very disturbing. Ideally, all external telephones should be in rooms opening into but separate from the main library. An internal telephone (with a suitably muted bell) can be provided for the librarians giving immediate service in the library."

PHOTOGRAPHIC REPRODUCTION

Many establishments had a photostat machine or kindred apparatus for general purposes, and in that case library photostating could be carried out on it. If no apparatus were available in the establishment, it might be worth getting one specifically for library purposes. Some fairly cheap small models were available.

In view of the growing use of microfilm, a microfilm reader should be provided (and it might need dimmed lighting). He doubted if most libraries would need a microfilm camera. For long runs of microfilm commercial sources might be cheaper and more convenient.

Mr. Fullman said his notes made no pretence to completeness, being merely a running commentary based on his own experience, put forward to stimulate discussion. He hoped that members of this conference would greatly add to the information he had given.

As a last word, he supported the plea in Carter's paper, for flexibility. Libraries in research organisations were usually small and frequently very active, and it was important that if the necessity arose, changes could be made without too much trouble to meet new situations.

Mr. V. O. Rees [*F.*] on University Libraries

Mr. Rees said the difficulties of architects and librarians on this subject would arise not in the enunciation of guiding principles, but in their application. For on every occasion when they had to collaborate, special conditions arose owing to the circumstances of the creation and growth of the particular university with which they were dealing.

This accounted in the main for the very varied designs and plans that were found both here and abroad (*e.g.* Aberystwyth, Cambridge, Liverpool and Leeds) and equally varied types would doubtlessly be evolved in the near future.

"The architect usually comes on the scene after a good deal of preliminary spade-work has been carried out, for the librarian will have been grappling with such matters as the numbers of books and the number of readers to be accommodated in the different parts of the proposed building. And usually the site will have been settled. Unless the site should happen to be an ideal one (say flat, unlimited, good sub-soil site, no near neighbours, etc.) which is not often the case, there are two controlling factors to reconcile—*the site and the requirements*."

"Because of a sharp fall across the site it might be most convenient to enter the building at a floor level appreciably above the ground at the other end. The question will arise whether

for this particular library—knowing all other requirements—the reading room should be placed on top of the stack. This fundamental question arose (not actually in this case on account of the levels but from the inadequacy of the dimensions of the site) in the case of the New York Public Library, where the very large reading room is to be found on the top of the very large stack. This solution has been much criticised, though access to the reading room is not so irksome in reality as it might seem on paper."

Such other considerations as relationship with adjoining buildings, streets, service roads and the principal direction of approach, etc., might influence the disposition of the main masses.

Because of the particular grouping of other buildings near the proposed library, the architect might feel obliged to adopt, in response, a symmetrical instead of an asymmetrical arrangement of plan, though probably preferring the latter as allowing greater freedom in planning and more interesting masses than a symmetrical composition.

"More profound will be those influences arising from the internal requirements as to the dimensions and uses of the different parts and the general manner of use of the whole building. Decisions regarding them will depend on the particular way it is proposed to run the library, and here the guidance of the librarian is indispensable."

"These requirements concern :—(1) *Control of Entry*. The main control should be so placed that the staff can observe all who enter or leave. It should be easily accessible from the main entrance, so that information can be given, and books received and so that it may become a book issuing centre for those not using the reading room. (2) *Reading Room*. Nearly always a rectangular room is adopted, as it allows ample side lighting from high clerestory windows above the books on either side. A circular plan, if large, may involve top-lighting. The latter is depressing if one is to study long indoors. Some normal eye-level windows seem necessary so that the reader should not be entirely cut off from the outside world. One section of the walls might be a great window looking on to green lawn."

"A hall of about 40 ft. wide by 200 ft. long is too long for pleasant reading and easy supervision—width five times the length, thus accentuating the feeling of length. I think a proportion of 1 : 3 width to length (53 feet wide and 150 feet in length) would be happier for all in it, and then either the long side or the two ends could be entirely glass and give on to a spacious terrace, where one could read in moments of sunshine."

"A gallery doubles the number of books that can be housed, but there is some prejudice against them on the score that the shuffling of feet above is disturbing to those reading on the main floor. If the side gangways are properly wide, there should be no feeling of being overlooked and I have heard no one complain of the existence of a gallery. The alcove type with galleries—such as is to be found at Aberystwyth and Cardiff—is definitely out of favour, but possibly quite shallow alcoves (of, say, 3 feet projection at 9 or 12 feet centres) need not be quite ruled out for short stretches. It would ease the gallery overhead—if there is one—in places and might add a little to the interest of the room as well as to the total number of books. The catalogue would be as central as possible so that it can be used with equal convenience in connection with reading and special rooms or stack. The cataloguers' rooms should be closely adjacent. In the past 'Stack' has meant 'Store Room' for books, accessible to library staff and to research readers only. This restriction will be necessary still in some cases. Students in their first years will find all they need for their subjects, either in the seminars of their tutors, or in the departmental libraries permitted and even required in some universities, or on the shelves of the reading room. But it may be found in the future that they are allowed in the stack. In any case the number of the teaching staff of some universities entitled to use the stack for their work already amounts to some hundreds. For a modern university the stack has become a great store of books in which one can read and work all day. Therefore it needs light on all sides, and to do this it must stand up out of the ground and, with its million books, tower over the Periodical, the Special, and the Administration rooms that cluster round its lower parts. It is now visibly the most important single element of the University Library. The great mass of books will be at least some 12 feet away from the glass wall. Some panes of glass to eliminate infra-red rays might be necessary in the upper panes."

This had been understood at Yale and Fiske Universities in the U.S.A. and at Liverpool here. In addition, a definite proportion of the total number of books might be safely kept in a real store room, probably in the lower regions, and preferably connected with the full-size lifts that serve the stack. These lifts must be readily accessible from a central hall for readers and book trolleys and staff, and would be best in batteries of twos or threes.

Periodicals

Readers studying recently-published articles or papers on their subjects would work in the periodicals room, but would need access to back numbers which could not be kept there for long. Hence reasonably easy access for them to the catalogue was necessary.

Extensions

Could extensions be defined, for, say, 20 years? Their smooth incorporation in a complete whole might then be more possible than it usually was. The degree of expansion was all important; 100 per cent. expansion seemed too much to ask for some sections. Large monumental buildings, complete on four sides, did not lend themselves easily to this purpose unless asymmetrical. Large circular halls or reading rooms, such as those of the British Museum, Manchester Central Library or Leeds University could not be extended in the ordinary sense of the word, nor could large rectangular rooms be extended : sometimes they could be lengthened, but this was not a very good solution. They could have adjuncts, additional or secondary reading rooms adjacent. Again, if the stack was already a very large and prominent feature of an imposing architectural composition, it would be difficult to increase it to any appreciable extent without botching the whole building—unless it was in a detached position or formed one of the side wings—an unlikely assumption when the working of the library must be contralised as much as possible. If 100 per cent. expansion became necessary it would seem to indicate a second stack. This led up to the question, would two reading rooms and two stacks of somewhat similar sizes—if they could be provided by some miracle of planning—be workable? Another question looming up behind was the maximum number of readers that could be provided for in a reading room of this class? Possibly in national libraries adopting the circular plan of the British Museum a rather larger number than 450 could be accommodated comfortably. 450 readers were provided for in the immense reading room of Minnesota University. But all sorts of complications were lurking round the subject and this kind of speculation was becoming rather profitless. Yet this question of maximum numbers was not entirely an academic one in view of the great expansion of the universities which was universally agreed to be inevitable.

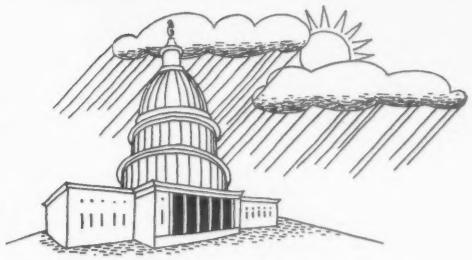
Until all requirements were accurately defined and doubts concerning them cleared up, the architect could not begin his special job of planning for them, and of making all fit together in the smoothest way possible, creating at the same time interior and exterior effects that blended together in a pleasing whole.

Mr. Rees said his remarks but recorded some of the doubts and queries that arose in an architect's mind as he studied the subject. There must be others, possibly not quite of the same kind, which would occur to the librarian. Neither one nor the other *alone* would be able to deal with them effectively, and their full consideration would require the integration of architect and librarian to the fullest extent that such a thing was possible.

HOUSE HEATING IN BRITAIN

The Views of an American Expert

Mr. Robert Thulman, Chief Mechanical Engineer of the Federal Housing Administration, has recently been in England at the invitation of Messrs. Bratt Colbran, Limited. Invited to meet Mr. Thulman, the Editor asked him to give his views on the differences between British and American practice in the heating of dwellings. The discussion took the form of a series of questions and answers which were taken down in shorthand and afterwards edited.



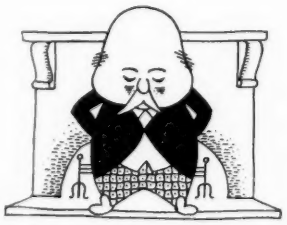
" In Washington . . . wait a few minutes "

QUESTION : Do you think that the difference between the American methods of heating small houses and those of Great Britain is due to climatic differences ? Do the climatic variations between different areas of the U.S. affect heating practice very much ?

ANSWER : In Washington there is a saying " If you don't like the climate, wait a few minutes." The similarity of the climate in terms of design temperature and degree days, of the sections of the States of Washington and Oregon west of the Cascade Mountains with that of the greater part of Britain is quite striking. The western or coastal part of British Columbia in Canada also has a similar climate. Of course there are very pronounced differences in climate within the U.S. The heating system in a northern house is apt to be complex, consisting of a heat generating unit located in the basement with a distribution system to carry the heating medium to each room. The southern house (usually one storey) is apt to be provided with a simple device located on the ground floor (there would probably be no basement) discharging warm air into one or more spaces with an " overflow " circulation to other rooms.

The Northern house is compact, generally small and built of heat resistive wall construction ; it will probably have a basement which, with the heating system located there, will effectively handle the cold floor problem. The Southern house is more spread out with attention to cross-ventilation, breezeways and features tending to improve summer comfort. Ceilings are usually well insulated in either area for improved summer comfort and with emphasis on the advantage of winter comfort and fuel economy in the Northern house. The answer, somewhat belaboured, to this part of your question is therefore, yes.

I would emphasise that the difference in house heating practice between the U.S. and Britain must be fundamental. Our practice is to provide a warm environment expressed in terms of air temperature. Yours provides one or more high temperature radiant sources in front of which the individual can sit or stand. Necessity, habit and preference seem to me to be responsible for the difference to a greater degree than climate, for the climates of Britain measured in degree days adjusted for the difference in inside temperatures, is not markedly different from that of a large area of the United States including my own State of Maryland.



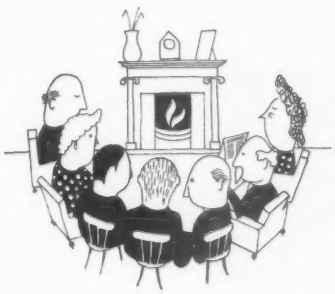
. . . " a high temperature radiant source "

QUESTION : Roughly what proportion of dwellings in the United States can be said to have some form of central heating and which is more favoured, the hot air heating from a central furnace with internal circulation, or low pressure hot water with radiators ?

ANSWER : The statistics on types of heating are contained in the Census Studies ; I'm not prepared to quote the figures without reference to them. Roughly 60 per cent. of new housing has some form of central heating. All multi-family structures are fully heated. On the second part of your question, a recent market study showed the public preference to be about equally divided between warm air and radiator heating. A study of new construction made in 1940 showed that forced warm air, gravity warm air and radiator heating had been used about equally.

QUESTION : What are your views on the open fire ? You know the Englishman's traditional liking for this social amenity.

ANSWER : May I refer you to a paper I have just written for the Institution of Heating and Ventilating Engineers ? On this point I said that there seems to be an assumption that the heating of the entire house will require the omission of the open fire and will deprive the Britisher of the satisfaction he derives from the traditional focal point. Habits and customs of long standing are not easily changed and it is neither wise nor necessary, in my opinion, to omit the open fireplace from the new housing you are constructing and that you are now planning. The virtues of an open fire are appreciated equally by the people of both countries. The hearth is just as much a focal point of the living room in our country as in yours. I have not heard the fireplace in the bedroom of the British home referred to as a focal point—its purpose in the bedroom is purely utilitarian and in this sense is essentially the same as the radiator, convector or warm air register in the bedroom of the typical American home. I believe that the whole American house, living room, dining room and bedrooms, becomes, through full house heating, a focal point or series of focal points wherein a widely varying and large number of family activities can be carried on. The bedrooms serve other purposes in addition to the mere provision of sleeping space—space for the children to study or play, space for the housewife to sew or the husband to read or work. Independence from the fireplace as a sole source of heat widens the family circle to every habitable room in the house and even extends it to the basement where a workroom for hobbies, laundry facilities, and space for drying clothes on cloudy or freezing days is comfortably provided. The congregation of the whole family within the living room is not restricted to a narrow semi-circle around the hearth. The cheerful open fire can be viewed from any part of the room without discomfort. By no means should the open fireplace be omitted—if its luxury can be afforded. We do not ordinarily include it in multi-family rental housing projects because of its cost.



. . . " restricted to a narrow semi-circle "

QUESTION : So you think that the social effects of central heating are important ?

ANSWER : I believe the social effects of

what I have elected to call "environmental heating" are an extension of the "family circle" to the entire house, a greater diversity of family activities within the house itself, more privacy for each individual member of the family without sacrifice of the desirability of the intimacy that congregation of the family in the one warm spot in the house provides, and a more effective utilisation of the space within the four walls of the dwelling. I'm not a sociologist but it seems to me to be self-evident that a modern civilised family consists of individuals whose individual interests are bound to be different. I find it hard to believe that the British boy and girl can study, play or work any more constructively within the confinement of a relatively small area of the lounge, with their parents listening to the wireless, than their American counterparts under the same conditions. Congregation of the family is a fine thing and everything should be done to encourage it, but need it be restricted to a small percentage of the area within the house?

QUESTION: What is the experience of your own family in your own house in relation to the use of central heating?

ANSWER: I have no objection to disclosing my family's habits in the interests of science. My own house is centrally heated with automatic oil firing thermostatically controlled; the heating system is average in performance. My wife likes to sew and cook, my daughter is away at college, my son has another year of high school. We seem to congregate almost anywhere that something interesting is going on. It might be in my daughter's room to hear all the news about her friends and activities at college when she comes home for the holidays. It might be in my son's room to work out some intricate details of model airplane construction, or possibly in the master bedroom to criticise the latest product of the sewing machine. Ping-pong in the basement is also a focal point. When we do congregate in the living room, which we do frequently, it's in the living room and not just a part of it. In the open fireplace we burn wood and it's very pleasant to sit in front of it or to one side and read or talk or listen to the piano or radio. We have a log fire probably ten to fifteen evenings in the winter.

. . . "*odour generated by cooking certain foods . . .*"

QUESTION: You know that in Britain now there is a school of thought which favours a general background warmth with apparatus for "topping up," such as is provided by gas or electric fires. What are your views on that?

ANSWER: The initial cost of the single heating system to do the whole job would appear to be less than that of a system designed to maintain a temperature below comfort level, plus auxiliary devices to elevate the temperature to the comfort point. The operating cost of the single system will probably be not appreciably more, and may be considerably less than the dual system.

QUESTION: How is central heating, in your opinion, related to ventilation of the dwelling? You know that in Britain the Building Bye-laws require us to provide a ventilation register in rooms which do not have a fireplace with a flue. What is American practice in this respect?

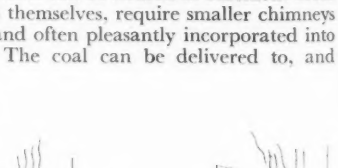
ANSWER: There can be no doubt that if there is a flue connecting one of the rooms to a point above the roof, and if that duct or flue is heated, and further, if openings in the exterior walls of the structure are provided, vitiated air from the rooms will pass up the flue and be displaced by fresh air entering the openings in the walls. If the rooms are freely inter-connected by open doorways, or if the doors do not fit tightly when closed, the ventilation of the whole house is quite effective. If these conditions are observed, the amount and effectiveness of ventilation are altered and the performance of the ventilating system is quite unpredictable in any case. Adequate ventilation is usually taken to mean the absence of odour generated by cooking certain foods or by the body. Kitchen ventilating fans appear to be a more direct and economical means of dealing with the problem of odour than is natural ventilation through a flue.

. . "*more privacy for each individual . . .*"

I have also noted the assumption here that the district or central heating system means, that bedrooms must be warm at all times and therefore, that they are uncomfortable to sleep in. This assumption implies a lack of control of the room heating units, yet a radiator is rarely installed without a valve, an air register rarely without a conveniently-controlled damper. With valves and registers and cross-ventilation with open windows the American bedroom temperature can readily be reduced from the comfortable temperature required for undressing, to any temperature approaching that of outdoors. It might be well in this connection also to point out that it is generally agreed that cold is stimulating and that stimulation is not conducive to restful slumber, also that heavy bed-clothing is likewise disturbing to healthful rest.

QUESTION: What are your views on district heating?

ANSWER: Here again I would like to quote from my paper to the Heating and Ventilating Engineers. I said there that I have been given the opportunity to examine in detail some of the district heating plans now under consideration here. Generally there seems to be an opinion that a district heating scheme can be justified only if the project is large and, in some cases, only if the heating service is a by-product of power generation with efficient small boilers, automatic stokers and temperature control. A small plant or, in a large project, a number of small groups, plants can be quite as efficient as the large system in which heat is generated in a single boiler-house. The several smaller group plants are usually much less costly to install and maintain. The single large plant requires a separate boiler-house structure and a large unsightly stack. In fact, the site planner will often locate it in as inconspicuous a place as possible and that location may be quite expensive in terms of distribution piping. The boilers of the small group plants can be housed in basement areas of the residential structures themselves, require smaller chimneys which can be successfully and often pleasantly incorporated into the architectural design. The coal can be delivered to, and stored in, these smaller plants in special bunkers from which it can be conveyed by automatic bin-fed stokers to the boilers without increase in expense over that of delivery to a single large plant. Automatic stoking and automatic control reduce labour expense to a minimum and one good maintenance crew can serve several plants. One important advantage of the group idea is that it is not necessary to invest a large amount of capital



. . . "*equally divided between warm air and radiator heating . . .*"

Drawings by John Pinckheard [A.]

in boiler and stoker equipment and separate boiler-house before the housing project is producing revenue from rents. The first part of a project consisting of several hundred dwelling units is usually occupied before ground is broken for the final part. The interval may be a matter of years. A single large boiler plant, completed simultaneously with the first part of such a project, may, therefore, operate so uneconomically during its first few years that the loss is never fully made up.

The pipe sizes and pump capacities used in the small group plants are much smaller and more economical to install than the large piping and pumps of the single large plant. The housing units can be distributed in groups so that the density per acre is the same as though they are spread more evenly over the whole area, without detracting from, and often improving the appearance of the whole layout. The larger open spaces resulting from arrangement of the housing structures of a large project into a number of smaller groups, lend themselves more readily to recreation and garden areas, and the amount of underground piping required is drastically reduced.

QUESTION : Bearing in mind that the ordinary worker's household has a weekly income of about £3 to £4, and also bearing in mind the present high cost of fuel, what system do you think should be aimed at for present-day heating of British houses?

ANSWER : For the income groups mentioned and with consideration to the present cost of fuel, district heating of multi-family structures considerably better insulated and designed so as to provide more usable area with less total area seems to be one solution. For the individual house, it might be profitable to explore the possibilities of applying some of the "overflow" devices of the more efficient solid fuel-burning type. These would be essentially "space heaters" of the non-radiant type designed to heat and circulate air. Another possibility is the indirect heater supplied with hot water from the domestic hot-water boiler combining the two services in one unit.

QUESTION : What do you think is theoretically the best method of heating the dwelling? What are your views on low temperature radiation resulting from heating of the structure? Has much research been done on this in the U.S.?

ANSWER : I assume you are still referring to the dwelling for the lower income groups. If so, the same answer applies. I believe the possibilities of ceiling or floor heating are most interesting from the standpoint of economy and performance. Considerable research of rather high calibre has been done on this in the United States. Your question emphasises the need for an exchange of research information between our two countries. Such an exchange can be mutually profitable—we feel that we have a long way to go in determining and defining human comfort.

QUESTION : What systems are favoured most by the Federal Housing Administration for apartment blocks and single houses?

ANSWER : The Federal Housing Administration does not "favour" any particular method or system for either apartments or single-family detached houses. The objective of its requirements is to assure the provision of heating facilities that are safe, economical, convenient and which will provide an acceptable quality of performance consistent with the type and class of dwelling, and the climate of the locality in which it is built. I realise that this is a rather broad generalisation, but the country has a varied climate and the types of houses vary widely. So do incomes. There are also a variety of fuels available. The objective doesn't close the door to new developments but tends to encourage them.

PRACTICE NOTES

EDITED BY CHARLES WOODWARD [*A.*]

IN PARLIAMENT

Protected Buildings

Asked how soon he hoped to publish the first of the lists of buildings of architectural or historic interest to be protected under Clauses 42 and 43 of the Town and Country Planning Act 1944, the Minister of Town and Country Planning replied that an expert committee under the chairmanship of Sir Eric Maclagan was advising him on the principles which should govern the compilation of those lists, and he expected their report shortly. In the meantime, a number of local investigators have been appointed and are collecting material. He could assure his hon. Friend that his officers were well aware of the urgency of the matter. In reply to supplementary questions the Minister said that adequate consideration was being given to the greater and smaller masterpieces of the eighteenth and early nineteenth centuries, and that the Committee was in close touch with the Royal Commission on Ancient Monuments. (2 April 1946.)

Requisitioned Property (Compensation)

In reply to a question the Secretary of State for War said that he knew of no variation in the liability which, under Clause 2 (1) (*b*) of the Compensation (Defence) Act 1939, rests upon all requisitioning departments other than those incorporated by Parliament in the Requisitioned Land and War Works Act 1945. Asked further under what authority the War Department Lands Agent, Fareham, had been instructed to base the settlement of claims under the above clause, lodged with, but not settled by, his Department before 1 January 1946, on the cost of repairs prior to that date, the Minister replied that he was advised that the compensation under the clause must be assessed on the basis of the cost of making good the damage as at the date of derequisitioning. The instructions referred to by the hon. and gallant Member were framed accordingly. (2 April 1946.)

Land Acquisition (Inquiries)

Asked whether he would take steps to see that in any inquiry consequent upon a compulsory purchase order the chairman assessor should be an independent person and not a civil servant attached to the Ministry, the Minister of Town and Country Planning replied in the negative. He said that the responsibility for the actual decision in such a case rested with him, and he was satisfied that those appointed by him to hold inquiries reported to him with complete fairness all the circumstances and points of view presented to them. It was the normal practice for inquiries into the acquisition of land to be conducted by civil servants. (2 April 1946.)

National Buildings (Architects)

Asked whether it will be the policy of the Government, when important national buildings are to be erected, that the architectural work for these shall be done by permanent officials of his Department or the Ministry of Health; or whether it will be open to selection of an independent architect by competition or some other suitable method, the Minister of Works replied that no change was contemplated in the policy followed by the Office of Works before the war in respect of important national buildings, which was to engage nominated architects of high merit for such works. It was the intention in future to meet fluctuating demands for Government buildings so far as possible by employing architects in private practice to a larger extent instead of, as hitherto, meeting fluctuating demand by taking on and discharging unestablished professional staff. (8 April 1946.)

Regent's Park Terraces

In answer to a question the Minister of Works said that two hundred and twelve large houses in the Regent's Park terraces are to be converted for temporary use as Government offices. The houses were taken over by agreement, either with the Commissioners of Crown Lands, or with the lessees. While not prejudicing any long-term proposals which may be formulated in respect of these terraces, the scheme will be of value in preserving them from further deterioration and, at the same time, providing for upwards of 500,000 square feet of office space which will enable him to release an equivalent amount of requisitioned accommodation. Asked further whether he would preserve the façade and layout of this unique survival of Georgian architecture, the Minister replied that that was the purpose of the scheme. (9 April 1946.)

Government Buildings (Architects)

Asked for which Departments his Ministry is responsible for the buildings and in how many of these cases the design for any important building was selected by competition or by some other suitable method which enabled independent architects to be considered for these com-

missions, the Minister of Works replied that the Ministry of Works is responsible for the erection of buildings required by Civil Departments together with those needed for housing the headquarters staffs of the Service Departments. Between 1918 and 1939, at least ten important schemes were entrusted to independent architects. In addition, as the hon. Member was aware, during the last war extensive use was made of nominated architects to carry out a large war programme of buildings, including hospitals, hostels, camps, schools and factories. Asked further whether he could give the House an assurance that the same policy would be carried out in peace as was found successful during the war, the Minister replied that he could not give an all-round assurance that the same policy would be followed, but he could say that it was the Government's intention to use outside architects as well as their own. (16 April 1946.)

National Buildings (Architects)

Asked whether he would give an assurance that in future the design of all important buildings to be erected under the control of his Department will have the architect selected by means of open competition, the Minister replied that he would refer the hon. Member to the reply given to him on 8 April. He was unable to give the assurance asked for. (16 April 1946.) (The reply of 8 April referred to is quoted above.)

War-time Buildings (Disposal)

Asked whether he would consult with the local planning authorities before buildings, erected by his Department during the war, are offered for sale to landowners and others, in view of the fact that many of these buildings do not conform to town planning and building bye-law requirements of local authorities, the Secretary of State for War replied that the hon. Member was no doubt aware of the provisions of the recent Building Restrictions (War-time Contraventions) Act which provide for the sanctioning in proper cases of continuance of buildings which do not comply with planning control and building laws. The War Office consults the Regional Planning authority before disposal of huts to the owners of requisitioned land. In other suitable cases the purchaser is advised to clear the position on the buildings he intends to purchase. (16 April 1946.)

New Towns. Major Expansions

Asked whether, arising out of the interim report of the New Towns Committee, he would give an assurance that he would, as far as practicable, confine major expansion to larger and more industrialised towns since small towns are generally dependent for their existence on the surrounding country area, the Minister of Town and Country Planning replied that the extent to which it is practicable to make major extensions of the larger and more industrialised towns is dependent on a number of complex factors such as transport, public utility service and employment needs. Accordingly it is not practicable to confine major extensions altogether to towns of that kind. (16 April 1946.)

LAW CASE

Claim for Dilapidations at the end of a Lease where a Building Licence was Unobtainable

In the case of *Eyre* v. *Johnson* the following judgment was delivered at the Royal Courts of Justice on 2 April 1946. The facts of the case appear sufficiently from the judgment.

JUDGMENT

Mr. Justice Denning : In this case the landlords claim damages for breaches of covenant to repair. The defence is that performance of those covenants became illegal under Regulation 56A of the Defence (General) Regulations. The facts are that in 1931 the landlords let premises 7 Loudoun Road, St. John's Wood, to the tenant. It was for 21 years reserving to the tenant the right to determine at the seventh and fourteenth years. He duly did determine by notice at the end of the fourteenth year so that the lease in fact came to an end in December 1944. The repairing covenants were a covenant to paint inside and outside at certain specified times including, in particular, the last three months of the last year, there was a general covenant to keep in repair during the term, and also a covenant to yield up in repair at the end of the term.

The facts, as I find them, are that since the outbreak of the war there has been very little done to these premises by way of repair. In fact, I am not sure that anything was ever done to the premises. When the time came when the lease was going to be determined and notice was given, the question of repair was then considered by the tenant. As there was at that time, the last six months of 1944, a regulation against doing repairs or decorations exceeding a certain amount without a licence, he applied for licences to do the work. It is quite plain on the correspondence that his endeavours were unsuccessful. He did not obtain a licence to do the necessary work with the result that he could not do it, and at Christmas 1944 the premises were yielded up unrepaired. The landlord on that brings this action for damages.

The point which is taken by the defendant is : " It was illegal under the Regulations for me to perform the covenant, and, therefore I could not perform it and I am not liable in damages." The first answer to that is that I think this condition of non-repair was really brought about by a series of breaches of the covenant to keep in repair. If the lessee had performed his covenants from 1939 to 1941 when there was no Regulation on the matter, or even from 1941 to 1944 when there was a Regulation but the limit was at first £500 and then £100, I do not think there would have been any difficulty in keeping these premises in proper repair and there would have been nothing to prevent him performing his covenant. He cannot rely as a defence in this action on a condition of things which his own breaches have brought about.

That really is a sufficient answer to this defence, but I go further. It seems to me that although illegality which completely forbids the performance of a contract may give rise to frustration, in some cases illegality as to the performance of one clause which does not amount to frustration in any sense of the word does not carry with it with the necessary consequence that the party is absolved from paying damages. Take this case. The landlord has performed all his part of the bargain. The tenant has had the premises all this time. The fact that it has become difficult, even if it were impossible, for the tenant to perform the covenant does not relieve him from the obligation to pay damages. The case of *Baily* v. *De Crespigny* was cited to me on behalf of the tenant. That case is reported in Law Reports, 4 Queen's Bench Cases, at page 180. When that case was considered by the House of Lords in *Matthey* v. *Curling*, reported in 1922 2 Appeal Cases, at page 228, Lord Buckmaster said : " I find myself unable to think that this has any application to a covenant entered into by a lessee, either to pay rent or to deliver up the premises. He has bound himself to do these definite acts, and it is no excuse that circumstances which he could not control have happened and prevented his compliance." In that case the tenant was held liable on his repairing covenant although circumstances which he could not control had happened and prevented his compliance. So that here, even assuming circumstances beyond the tenant's control which prevented his compliance, I am satisfied that it is not a defence to this action for damages. So that both grounds, firstly, the ground of prior breaches, and, secondly, the point of illegality under the Regulation, are not a defence to an action for damages.

I hold in favour of the landlords and I award in this action the sum of £670 and I order the defendant to pay that amount with costs.

BUILDING REGULATION

Building Restrictions (War-time Contraventions) Act 1946

This Act came into force on 26 March 1946 and applies to England, Wales, Scotland and Northern Ireland.

The Act concerns work carried out on land and the use of land during the war period which do not comply with building laws or planning control.

" War Period " means the period between 3 September 1939 and the commencement of this Act.

At any time within five years from the commencement of this Act an application may be made to the authority for enforcing building law or planning control to determine whether the work or use fail to comply with any building laws or planning control. The application may be made by the owner or occupier of the land, by a person who intends to acquire an interest in the land or by a person who has borne any of the cost of the work carried out during the war period.

The authority must determine whether the work or use fail to comply with any building laws or planning control and must specify the law or control in question.

If the authority determine that the work or use fail to comply they must also determine whether the work or use shall be deemed to comply, either unconditionally or subject to such conditions as to the time for which the work or use may be continued, or the carrying out of alterations as the authority think expedient.

The application must be accompanied by such plans and other information as will enable the application to be determined.

The authority must publish a notice of an application in one or more local newspapers and serve notice on any person they think specially affected. The authority must publish the notice within fourteen days of the application and must consider any representations made to them within fourteen days of the publication. If the authority fail to determine the application within two months from the end of the second period of fourteen days, the applicant may serve notice on the authority that he appeals to the Minister of Health and the authority shall then be deemed to have refused to entertain the application.

Where the applicant or any person who has made representations

is dissatisfied by a determination of the authority or by the refusal to entertain the application, he may within twenty-eight days of the determination or refusal appeal to the Minister of Health who may determine the application as he thinks proper, or, if he is satisfied that the applicant was not entitled to make the application, decide that it should not be entertained. The Minister may state a case on any question of law for opinion of the High Court, and if directed by the Court must do so.

If there is no appeal the authority's determination is final and in the event of an appeal the Minister's decision is final.

If, since a previous application determined that the work or use did not comply with building laws or planning control, there has been a material change of circumstances since that application, a subsequent application may be made with the consent of the authority or on appeal the Minister of Health.

If the Minister of Town and Country Planning thinks that having regard to the public interest either generally or locally that applications in respect of planning control should be referred to the Minister of Health for decision instead of the authority for enforcing planning control, he may give directions accordingly to the authority, and the reference is then deemed to be a refusal of the authority to entertain the application. The authority must give the Minister of Town and Country Planning such information concerning applications as he thinks necessary so that he may give the required directions.

An applicant may require to be heard by a person appointed by the authority before the application is determined. In the event of an appeal, either the applicant or the authority may require to be heard by a person appointed by the Minister of Health, before the Minister determines the appeal.

Where during the five-year period beginning with the commencement of this Act any person proposes to take steps to enforce a building law or planning control he must serve on every owner and occupier of the land twenty-eight days' notice of the proposal. Any person can then within the twenty-eight days make an application to the authority for enforcing the building law or planning control, and within seven days of the application notify the person proposing the enforcement accordingly. No steps for enforcement may then be taken until the final determination of the application. After the final determination of the application steps for enforcement may be begun within twenty-eight days without notice. In reckoning the five-year period the time occupied by applications and appeals is to be disregarded.

Where an application has been determined subject to any condition as to time or otherwise and the condition comes to an end or is not complied with, the five-year period will run from the date on which the determination has ceased to have effect.

Under the London Building Acts (Amendment) Act 1939, section 89, sub-section (2) notice of irregularity may be served by the district surveyor within twenty-one days of his discovery of the irregularity in cases where no notice of intention to carry out work had been given. By this Act the time is extended to twelve months from the commencement of this Act or to twenty-one days from the district surveyor's discovery whichever is the later.

No proceedings for fine or other penalty may be brought against any person for carrying out work during the war period which do not comply with building law. Proceedings for the recovery of expenses in enforcing a building law may be taken.

Where there has been no application for determination in respect of work or use failing to comply with building law or planning control and no steps for enforcing the law or control have been begun before the expiration of five years from the commencement of this Act, the work or the use shall be treated as complying with the building law or the planning control as the case may be. This will not apply to work or use not complying with planning control carried out between 3 September 1939 and the commencement of the Town and Country Planning (Interim Development) Act 1943 (22 July 1943) on land to which a resolution to prepare or adopt a scheme under the Town and Country Planning Act 1932 was in force at the time the work or use was begun and the planning authority, within five years from the end of the war period, serve on every owner and occupier of the land a direction that the work or use will not be treated as complying with planning control.

During five years from the end of the war period any officer of an authority responsible for enforcing building law or planning control may enter premises at all reasonable hours to ascertain whether there are works that do not comply with building law or planning control or whether the use does not comply with either. There is the same right of inspection in cases where a person has made an application to the authority to determine whether work or use fail to comply. Where premises are occupied admission cannot be demanded as of right unless twenty-four hours' notice has been served on the occupier. Any person obstructing the officer is liable to a fine not exceeding five pounds. If the officer discloses any information obtained by him in a factory, workshop or workplace regarding any manufacturing process or trade secret he is liable to a fine not exceeding one hundred pounds or imprisonment not exceeding three months.

Non-compliance with "building law" may have relation to any of the following Acts :—

Public Health Act 1936, Part II or IV or bye-laws made thereunder.

Public Health (London) Act 1936, Part II or III or bye-laws made thereunder.

London Building Acts 1930 to 1939, or bye-laws made thereunder.

Public Health Act 1875, section 157, or the Housing Act 1936, section 140, sub-section (2) or bye-laws made thereunder.

Public Health (Buildings in Streets) Act 1888.

Roads Improvement Act 1925.

Public Health Act 1925, sections 30 to 34.

Restriction of Ribbon Development Act 1935.

Any local Act made for similar purposes or any bye-laws made thereunder.

Non-compliance with "planning control" means :—

Where the land was subject to a resolution to prepare a scheme under the Town and Country Planning Act 1932, that the work was carried out or the use begun otherwise than in accordance with the terms of an interim development order or of permission granted under such an order.

Where the land was subject to a town planning scheme that the work was carried out or the use begun otherwise than in accordance with the provisions of the scheme.

"Enforcement of building law" means that the work that does not comply may be demolished or removed or be altered so as to comply.

"Enforcement of planning control" means to remove, pull down or alter buildings or works not in conformity with a town planning scheme under the 1932 Act, or prohibit a use of land not so conforming, or to take similar action under the Town and Country Planning (Interim Development) Act 1943 where there is no scheme in force.

In calculating the five years period during which building law or planning control is enforceable, time during which the Crown has any interest or right to possession is to be disregarded.

Note.—It will be seen that appeals in respect of planning control are to the Minister of Health. The R.I.B.A. Town and Country Planning Committee asked Lord Balfour of Burleigh to move amendments in the House of Lords so that the Minister of Town and Country Planning should have statutory authority in the Bill itself. Lord Balfour was good enough to move these amendments but the Government resisted them, and Lord Henderson said : "What the noble Lord has in mind in moving this Amendment is perfectly clear. The method he suggests, however, is open to objection. The Government is but one Government, and it is an incorrect procedure to impose a duty on one Minister of the Crown to consult another Minister when exercising a statutory function. When two or more Ministers are concerned administrative arrangements between the Departments affected are always made with a view to insuring the necessary liaison. I can assure the noble lord that in practice there will be close and constant consultation between the Ministry of Health and the Ministry of Town and Country Planning upon the application of planning law under this Bill, as there will be with other Departments concerned with various aspects of building law. It is probable that some questions can be settled on general lines without the necessity for individual consultation in the cases which arise. But, obviously, any case of importance will have to be the subject of specific consultation with the Ministry of Town and Country Planning, or, as the case may be, with the Ministry of Transport. I hope, therefore, that the noble lord will not press the Government to put on the face of the Bill an obligation which is already implicit in the Bill, and which is contrary not only to sound constitutional doctrine but to the modern practice in such matters to make explicit." Lord Balfour said : "In view of the noble lord's very considered and definite statement that there will be definite arrangements for consultation, I beg leave to withdraw my amendment." (House of Lords, 7 February 1946.)

Priority Distribution Scheme for Building Materials

This scheme came into force on 25 April and affects building materials and components in short supply.

Manufacturers and merchants will supply goods ordered under priority symbols before dealing with non-priority orders.

Priority symbols will be given to all work which will increase housing accommodation and other work that is essential to national well-being.

The priority symbol consists of the name of the Licensing Authority, the letters W.B.A. and an identifying number. The letters W.B.A. will be used only for building materials and components.

The same priority order may not be placed with more than one supplier.

Priority certificates will be issued by the Licensing Authority in respect of W.B.A. work current on 25 April and will be given an identifying number.

Building Committees of Government Departments concerned will grant priority certificates on the application of the Government Department sponsoring each class of essential work, and the letters W.B.A. priority will carry the preference for building materials.

W.B.A. priority includes: Site preparation and the erection of houses, flats and other dwellings. Rebuilding of cost of works houses. Repair of C (*b*) houses on a lump sum or fixed fee basis. Any other work which will result in an *increase* in housing accommodation.

W.B.A. priority is also granted to work on essential public utilities and factories.

W.B.B. priority is given to other necessary work, but not to all less important and luxury work.

Four priority certificates are to be used and signed by the builder, the Licensing Authority stamping the certificate and giving the priority symbol.

"A" certificate deals with bricks, tiles, concrete blocks, metal windows, asbestos goods, sheet glass, roofing felt, paint and distemper.

"B" certificate deals with electrical components, gas fires, washboilers and water-heaters.

"C" certificate deals with baths, tanks, basins, taps, sinks, W.C. pans and service pipes, and also door furniture, locks, sheet lead and pipes and sheet copper and pipes.

"D" certificate deals with grates, boilers, and solid fuel appliances together with cast-iron gutters and rain water pipes.

MINISTRY OF HEALTH CIRCULARS

71/46. 1.4.46. This Circular refers to the rebuilding of cost of works houses and to the new form CL.1136C which is now required to be used in the application to the local authority for a building licence and in the negotiations with the War Damage Commission. The Circular informs local authorities that until further notice no approval may be given for the rebuilding of a house with an approximate cost of more than £3,000 unless the authority are satisfied, and have so informed the War Damage Commission, that labour and materials are available and that the other parts of their general housing programme will not thereby be embarrassed. The form CL.1136C may be obtained from the local authority and contains notes of the information required in the making of applications.

Emergency Housing Accommodation

47/46. 28.2.46. In cases of adaptation of spare rooms for separate use the Minister of Health has requested that, for the time being, local authorities should obtain his prior approval where it is proposed to incur expenditure exceeding £25 in respect of the accommodation provided for any one family unit. It is understood that additional insurance cover may be required to protect householders against loss through theft or larceny by sub-tenants and lodgers. The local authority are asked to warn the householder of this contingency when recommending tenants so that he may provide in the rent accordingly.

Essential Work Orders and Permanent Housing

54/46. 14.3.46. Essential Work Orders may now be applied to permanent housing and local authorities can make requests accordingly, but scheduling should not be applied indiscriminately but only where this course is rendered necessary by circumstances. No site will be scheduled unless the employment and welfare conditions are satisfactory. At present no scheme for "payment by results" has yet been agreed for permanent house erection and this point will not arise.

Workers will not be directed away from home except in most exceptional circumstances, neither will the Ministry of Labour direct workers from other contractors to any contractor undertaking the erection of permanent houses who is considered to be in a position to transfer his own workers from other less essential work.

FEES. COMPENSATION (DEFENCE) ACT 1939

When a property is derequisitioned and a claim is made under Section 2 (1) (*b*) of the above Act, a contribution towards fees reasonably incurred by the claimant may be allowed *ex gratia* by the requisitioning authority at the rate of five guineas per cent. on settlements up to £5,000, with lower rates on the excess above that figure. The fees will apply where the compensation is paid on the basis of the cost of making good the damage.

Where the cost of making good the damage exceeds the value of the land and the value of the land is therefore the basis of compensation, the *ex gratia* contribution by the authority towards the fees will be Ryde's Scale plus one-third.

Where both the cost of making good the damage and the valuation of the land have to be made in order to determine the basis of compensation because the basis cannot be otherwise determined, an *ex gratia* allowance by the authority towards the fees may be made, on the amount of the settlement, of five guineas per cent. up to £5,000, with lower rates on the excess above that figure.

VALUATION APPEALS AND REFERENCES

The Rules governing appeals and references under the War Damage Act 1943, to tribunals appointed under the War Damage (Valuation Appeals) Act 1945, have now been made and are obtainable at H.M. Stationery Office. (S.R. & O. 1946, No. 202 L.1. Price 4d.

BOOK NOTES

Round the Shires, by Martin S. Briggs. xii + 303 pp. London. Cassell. 1945. 15s.

This book is written in a pleasantly easy style and in a way that should appeal both to those who have a native interest in the places which Mr. Briggs describes and also to those whose interest is general rather than local; above all it will appeal to those who are interested in local architecture.

The author wisely does not confine his observations and illustrations exclusively to ancient monuments; modern buildings and bomb damage find a place in the descriptive accounts. Reference is frequently made to the major geological formations of the counties, but it is a matter for regret that more has not been written on the influence they have had upon regional architecture.

Prior to the wholesale importation of materials from a distance, the use of those found locally imparted a distinctive appearance to the buildings and the variation of our landscapes and peculiar characteristics of the countryside and urban developments are solely due to the diversity of British geological formations, vegetation and climate.

Perhaps in future editions when paper is more abundant we may have a fuller and more detailed account by Mr. Briggs which will include a sketch map of the major geological formations and the navigable rivers, which prior to road and rail transport were the determining factors in the supply and use of raw materials.

The reader feels throughout the description of the various counties that he is brought by Mr. Briggs into touch with the realities of the same and that each county receives its full share. As the pages are turned, a word picture of England is unfolded.

The book is attractively illustrated with line drawings which greatly enhance the letterpress, but I feel the author's pen has over-emphasised the smoke in "A Sketch in Hanley Public Park," p. 88, and his description of the Potteries is surely on the gloomy side.

So much for the past and present, but what of to-morrow and the day after? It is merely a pious platitude to keep reiterating that the Fine Arts and Sciences know no frontiers and that their products must be regarded as part of the common heritage of mankind.

The desire of the author to kindle and stimulate an understanding and appreciation of a virile architecture should commend itself to the professional and intellectual laity alike. Although influenced by the prevailing fashion the local builder's technique should not be set aside as merely local and provincial eccentricities. Perhaps some day the people of a county will take as much interest in its architecture as it does in its cricket.

It is to be hoped that future editions of *Round the Shires* will not have to describe a filleted exotic architecture and site planning, both lacking what might aptly be described as "the Nelson touch."

JOHN ARCHIBALD [A.].

A History of Universal Architecture. Edited by V. H. Vladimirov, M. Y. Ginsburg, J. L. Matz and S. I. Sakharov. Volume I. 4to. 131 pp. Published by U.S.S.R. Academy of Architecture.

This volume is divided into four parts:—

1. The Architecture of the pre-class and early class society.
2. The Architecture of the ancient eastern despotic world.
3. The Architecture of the Ægean world, and

4. The Architecture of ancient Mexico and ancient Peru.

This book is intended as a text-book for students of higher architectural schools as well as for the general public, and the general approach to the various architectural problems, especially in their social and economic aspect, is from a dialectical point of view.

The architecture of the primitive-communal society is traced to various parts of the world and indicates the inevitable cause and effect in the development of architectural forms in a pre-class society. It is difficult, of course, to speak of "Architectural" forms in the Paleolithic and Neolithic periods, as in the beginning "Architecture" was primarily an outcome of a purely materialistic existence and has not yet reached the level of an art. The reason being, in the words of Engels, "that the primitive man was too burdened with the hardships of existence and the struggle with nature." Similar types of dwellings, etc., seem to have appeared in places as far apart as the upper regions of the Volga and the valley of Arizona.

"The principal aim in the study of the history of Architecture must be the determination of the link between the creation of the architectural form of the period and its historical and cultural background"—this premise from the Introduction passes like a thread through the structure of the entire book.

It would be quite impossible to dwell, within a limited space, upon the wealth of valuable and interesting information in this book, some of it quite new to the student brought up on the study of the orthodox histories mostly used in Britain. The reader finds, for instance, that quite original architectural works reflecting the historical development of the various national groups of the Soviet Republics sprung up here and there at various times and can be seen in the form of the delightful timber churches of the North, the severe monuments of Kiev, Novgorod and Pskov, the classical groupings of Leningrad, in the national traditional buildings of the Ukraine and Armenia, Azerbedjan and Uzbekstan.

A full translation of this book into English would, I feel, be of great value to the serious English student of the history of one of the most important manifestations of the constructive spirit of mankind.

Reviewed by Z. Sirotkin [*A.*]

British Restaurants: An enquiry made by the National Council of Social Service. 8vo. 86 pp. illsd. Oxford University Press. 1945. 3s. 6d.

Reviewed by Ruth Ellis [*F.*]

This analysis is interesting, although necessarily limited, being based on detail acquired in London and Birmingham, the restaurant in the former being run by voluntary contribution and the latter by municipal organisation.

The book deals with the scope of communal feeding during the war, the type of people using the communal restaurant and their attitude towards communal feeding.

The purpose of the book is to ascertain the desirability of continuing the service in post-war conditions and the conclusion is reached that far more good cheap restaurants are needed if the general improved standard of nutrition is to be maintained. Workers in industry and offices should be able to get a three-course meal at a price they can afford, but the success of such restaurants will depend upon good food served in attractive surroundings, fresh vegetables and good cooking.

Such restaurants can be made to pay but the small margin of profit makes it unlikely to appeal to private enterprise.

It recommends that local authorities be given power to establish and maintain the British Restaurant service under the Ministry of Food.

Modern Timber Design, by Howard J. Hansen. 8vo. vi + 232. New York: John Wiley. London: Chapman & Hall. 18s.

This book is virtually an abridged edition of *Wood Handbook* combined with *Wood Structural Design Data*, with the addition of some useful explanatory problems.

The solutions and the details of the sketches are not always strictly accurate and will not withstand close scrutiny, e.g., the dimensions in Fig. 15 are not consistent and full details of the splice plate are not given.

As a textbook for American students it will save reference to the earlier publications. For English students only the basic data presented at greater length in *Wood Handbook* would be useful.

The data on nails and screws are explicable to American standards which are not available in this country. Until stress graded timber is available detailed economical and efficient design is impracticable.

The section on glues, etc., is, however, worth further study in giving an additional data on an ever expanding subject.

British architects may be reminded that the forthcoming Code of Practice on the Structural Use of Timber in Buildings will condense all the data on material available in this country and in some respects will cover a wider territory.

The Requisitioned Land and War Works Act, 1945, by T. Mervyn Jones, M.A., LL.M. (Cantab), LL.B. (Wales). Published by Messrs. Butterworth & Co., Temple Bar, W.C.2. Price 21s.

This book is a concise explanation of the legislation relating to the compulsory acquisition of requisitioned land and the compensation payable, and is arranged in a convenient way for reference. The effect of the Act is explained in the first part of the volume, the second part being the text of the Act with notes on the sections and references to the Defence Acts and the Acts which affect compensation.

Quotations from *Hansard* are included, being the explanations given in the Houses of Parliament during the debates on the Bill. It was Humpty Dumpty who said that when he used a word, it meant what he chose it to mean, neither more nor less. In the event of the Court having to construe the Act, it will be interesting to see whether a Minister's explanations of what the Government meant will be adopted by the Court, that is on the assumption that *Hansard* could be cited.

The Supplies and Services (Transitional Powers) Act 1945 has postponed the two-year period during which the Government had, under this Act, to decide whether they wanted to retain any land which they had requisitioned or used during the war. This two-year period will not now commence until five years after 24 February 1946 (the date of the expiry of the Emergency Powers (Defence) Act 1939) and property owners will, in some cases, be left in uncertainty for seven years before knowing whether or not their land is to be returned to them.

This book should be a valuable addition to the library of the professional man whose practice includes the subject of compulsory purchase.

The author is Deputy Town Clerk of Newport, Mon.

C. W.

Colonial and Tropical Building and Prefabrication: two important French studies.

Through the kindness of the French Cultural Attaché in London the Library has been presented with extra copies for the lending library of two recent numbers of the journal *L'Architecture Aujourd'hui* on French Colonial building and planning and prefabrication.

The issue on colonial building (France *d'outre mer*) is the most useful general view of building and planning technique in hot countries which has yet come our way—in all the centuries of British colonial rule there has been no such intelligent presentation of imperial building achievement and responsibilities. Many types of buildings are illustrated and many planning schemes, including le Corbusier's revised Algiers plan.

Préfabrication is a summary of technique and methods in France, England America and other countries, with some general articles on the leading questions.

Our French colleagues can be congratulated on the brilliance of these two vast and useful journalistic efforts.

Westminster Bridge. Album, 16 in. × 9¾ in., marbled covers, *Pont de Londres et au tres* on spine, containing 12 MS. letters and memoranda, three pamphlets and sundry drawings and engravings, chiefly relating to Westminster Bridge.

Most of the contents of this album, which has recently been purchased by the Library, must have been assembled by d'Hermand, an official engineer under Louis XV, whose title is variously given in the letters. The album is of later date. The letters, memoranda and drawings record an approach made to d'Hermand by the first Earl Waldegrave (1685-1741), British Ambassador in Paris, regarding designs for Westminster Bridge. There is one letter from Waldegrave to d'Hermand. Another letter is from Charles (later Admiral Sir Charles) Knowles (d. 1777) to d'Hermand is mainly concerned with the ignorance and vanity of English architects: "Je vous envoye ceux que sout publie pour vous fair voir L'ignorance et Vanité de notre Architects. Enfin apres une conference de quatre heures, et que les comissaries ont bien fariquer avect l'importunité de ces impertinente gens, ils s'ajourner jus qu' au 23 me de ce mois. . . ." The French is Charles Knowles's own. The pamphlets are: i, John Price, *Some considerations . . . for building a . . . bridge from Westminster to Lambeth*, 1935; ii, Batty Langley, *A Design for the Bridge at New Palace Yard*, 1736; and iii, Nicholas Hawksmore, *A Short Historical Account of London Bridge, with a Proposition for a new . . . Bridge at Westminster*. Other papers in the album include an engraving of three designs for Westminster Bridge by Edward Oakley, 1735, two drawings of Hexham Bridge, signed by William Hall, 1790, and William Johnson, 1796, respectively, a drawing of the Ponte di S. Trinita, Florence, and engravings of the Bridge at Neuilly and the road from Paris to S. Germain.

Four Recent Swiss Publications on Reconstruction Problems

Die stadt und ihr boden, by Hans Bernoulli in "The Human City" series. 4to. 127 pp. 1946. Verlag für Architektur A.G. 1946. Fr. 16.

Wiederaufbau (reconstruction): documente über zerstörungen planungen konstruktionen, by Max Bill. 8vo. 176 pp. Verlag für Architektur A.G. Zurich. 1945. Fr. 14.15.

Zur entwicklungsgeschichte des städtebaus (a history of the development of town-planning), by A. Christen. 8vo. 176 pp. Verlag für Architektur A.G. Zurich. Fr. 10.

Bauliche sanierung von hôtels und kurosten. Final report. Edited by Dr. A. Meili. 4to. 232 pp. + 31 folded maps and other diagrams. Verlag für Architektur A.G. Zurich. 1946.

Swiss architecture and architectural writing is very much alive and in a mood which is both creative and enquiring. The first three of the following four books represent the enquiring and critical mood applied to the reconstruction problem generally—the last is a unique example of survey and plan, applied to the tourist industry by a group of able architects working for the State.

Towns and the Land is the first volume in the series now being published in Zurich by an enterprising group of modern Swiss architects who are endeavouring to make a contribution to the intelligence of reconstruction planning in Europe. Hans Bernoulli's book is largely a study of the problems of land use and acquisition. We are all aware that even the best of the most recent replanning schemes fall far short of the ideal which should be attainable if all the intellectual and technical resources we possess could in actual fact be applied. One main obstacle remains—the present system of land division and ownership in both town and country. How, Prof. Bernoulli asks, can a new town ever arise on the chaotic foundations of the past? He suggests that the mediæval towns, especially those of the twelfth and thirteenth centuries, show the way for an efficient modern leasehold practice.

The scheme Prof. Bernoulli proposes is very much like the established British leasehold system and it is shown to possess the merits described in a paper by Mr. H. W. Wells published in the R.I.B.A. JOURNAL in October 1944.

The book is excellently illustrated.

Wiederaufbau is a contribution to the assessment of planning and building construction techniques of service in reconstruction in Europe. For the most part it consists of a detailed and admirably presented summary of British, American, Swedish and Swiss house planning and construction systems. An appendix deals with proposed schemes of development and construction in Switzerland and a critical bibliography.

In *Zur Entwicklungsgeschichte des Städtebaus* Dr. Christen states the need for historical research in the development of contemporary architecture and planning. Only by means of historical survey can we estimate the value of particular traditions and observe tendencies objectively.

The present survey summarises systematically the increasing mass of data on the history of town planning from ancient times to to-day.

The last book shows Switzerland—"the playground of Europe" paying attention to tourist amenities as its first, or one of its first, industries. This report, superbly well produced and a nostalgic delight for the Englishman deprived by war and poverty from any immediate chance of visiting Switzerland, is the result of a full five years' study of the hotel services and "resort" amenities of all the chief tourist centres in the country. The publication has been promoted by the Federal Transport Office and the work as a whole undertaken by that office, the Federal Department of Public Economy and the Hoteliers' Society under the general supervision of Dr. Meili, an architect.

Each town or village was surveyed and a report prepared on the general improvements desired. These surveys and plans, now combined into a book, are laid before the Swiss hotel industry, the local authorities and the public as suggestions to be implemented locally and privately as opportunity offers and grants-in-aid are promised from the confederation.

For each town one or more architects were appointed. Their reports, which form the body of the book, deal with each place in turn and incidentally include a number of very interesting projects for new hotels and notes on hotel planning. The verbal reports are followed by the plans, all beautifully drawn and reproduced in folding plates.

The whole work is a model of its kind and should be seen not only by architects but by the tired and frowsty hotel and tourist gentlemen of England.

All of these books can be bought by British readers either direct or through the book trade.

The Polish School of Architecture: 1942-1945. Charles Birchall & Sons, Ltd., for the University of Liverpool. 4to. 248 pp. 1945. 30s.

REVIEWED BY DENIS WINSTON [*A.*]

At a time when the forces of destruction seem generally triumphant it is heartening to have this evidence of a constructive effort in architectural education which is also a successful essay in internationalism.

To old students of the Liverpool School of Architecture it will seem appropriate that the Polish Government, in looking for a centre in England where their young architects could be prepared for their tremendous future tasks, chose the school at Liverpool which was always happy to welcome men and women from many lands and gave its English students the rich experience of working side by side with them on common problems in the studios. In welcoming the Poles the School was only enlarging an existing custom, and this perhaps accounts for the successful and friendly way in which the two departments settled down to work.

The book contains a short history of the Polish School and its activities at Liverpool with an account of its teaching staff and equipment, followed by a description of the course of studies undertaken in each year; but most important is the series of illustrations accompanying the text, examples of the students' work which give a sparkling picture of the sequence of problems whose solution provided the central core of the training.

When one compares these drawings with the work of English students one is forced to acknowledge that they give a feeling of deliberate architectural intention, and that they usually succeed in expressing this intention imaginatively in three dimensions with a confidence that has been lacking in the work of most English students in recent years: in the latter case the technical requirements of the programme too often appear to overwhelm the author and his project then becomes a mere technical arrangement of accommodation awaiting the life-giving breath of imagination and the discipline of an overriding architectural conception.

Two factors appear to contribute to the confidence and evident enthusiasm of the authors of the schemes illustrated in the Book of the Polish School. Firstly, these young students knew that they were released from the Army with a special purpose; they were given a special mission, to prepare themselves for the rebuilding of the shattered towns and villages of their native land: and thus each drawing is not merely an answer to an academic programme but a contribution towards the rebuilding of Warsaw, Cracow, or some home town remembered by the student. The School itself was merely an embryo of a future school in Warsaw and, during the war years, books, slides and other material were collected in readiness for the return home. Both staff and students felt that they were preparing themselves for a great national resurrection and this has added an emotional overtone to their work.

But the students were not only strengthened by the vision of a future Poland, they were equally inspired by the knowledge of Poland's past, and the book is a timely reminder that great architecture has usually arisen when the architect has felt himself not only in tune with a universal movement like the Gothic of mediæval Christendom or the humanistic movement of the Renaissance, but was also conscious of a distinctive local tradition; thus in a Christopher Wren, for example, we admire the Englishman as well as the man of the Renaissance and we recognise his native strength though he marches in the ranks of an international army. One of the first problems of our time is the exorcising of the devil of nationalism without sterilising the kind of national culture of which this book is a convincing witness.

It is good to read that this war-time experiment has had a permanent result in the creation of the Sikorsky Scholarship, which will bring a student from Poland each year to Liverpool. How fine it would be if an exchange could be arranged so that an English student could visit Poland in the same way!

Town and Country Planning Law, by Eoin C. Mekie, B.L., and Harold B. Williams, LL.D., Barrister-at-law. 8vo. xiv + 556 pp. London: E. & F. N. Spon and Eyre & Spottiswoode. 1946. 37s. 6d.

This book is written in a way that should appeal to the professional man whose practice requires a knowledge of the law relating to Town Planning. Each branch of the subject is dealt with under separate chapters with marginal references to the sections of the Acts referring to that branch. The separate chapters have as titles Planning Authorities, Schemes, Interim Development, Acquisition, etc., so that reference to any phase of the subject is facilitated. The book is written in great detail and should assist the lay mind to understand what has become a maze of legislation. C.W.

NOTES AND NOTICES

MEMBERS FROM JAPANESE P.O.W. CAMPS

Information has been received that the following members have been released from Japanese hands and are safe and well :—

CRUDEN, S. H. [*A.*]

TAUTE, MATTHYS [*A.*]

MEMBERS SERVING WITH THE FORCES

KILLED

KNOX, J. T. [*S.*], Sgt. R.A.F.

PATON, J. C. [*A.*], F/O R.A.F.

DECORATIONS AND DISTINCTIONS

COOK, A. B. [*S.*], F/Lt. R.A.F. Awarded D.F.C.

GODDARD, A. G. [*S.*], Capt. R.E. Mentioned in Despatches.

JACKSON, RALPH [*F.*], Major R.E. Awarded M.B.E.

OVEREND, BEST (*A.*). Mentioned in Despatches.

TAYLOR, JOHN P. [*A.*], Lieut.-Col. R.E. Awarded M.B.E.

WREN, L. [*L.*], Major. Awarded Belgian decorations "Chevalier of the Order of Leopold II with Palm" and the "Croix de Guerre 1940 with Palm."

Appointments Vacant

GOVERNMENT OF SIND, INDIA

IMPROVEMENT AND EXPANSION OF THE CITY OF KARACHI

Applications are invited for the post of Town Planning Expert to the Government of Sind. Candidates should be British subjects, preferably under 45 years of age, and should (i) be Fellows, Associates or Licentiates of the Royal Institute of British Architects, or Fellows or Associates of the Indian Institute of Architects and/or Members or Associate Members of the Town Planning Institute ; (ii) have ten years' experience in Town Planning ; (iii) have some knowledge of conditions in the East. Contract for five years. Salary, Rs.2,000 a month, rising annually by Rs. 100 a month to Rs. 2,500 a month (approximately £1,800-£2,250 per annum). Provident Fund.

Free passage to India for appointee and wife and return passages if of non-Asiatic domicile.

Further particulars and forms of application may be had on application (by postcard) from the High Commissioner for India, General Department, India House, Aldwych, London, W.C.2. Last date for receipt of applications 6 June 1946.

GOVERNMENT OF BIHAR INDIA

The High Commissioner for India invites applications for the post of Architect and Town Planner, Public Works Department, Government of Bihar.

Candidates should not be more than 45 years of age and must be A.R.I.B.A. or F.R.I.B.A., preferably holding a degree or diploma in architecture with not less than five years' experience in architectural design and town-planning in India or the East. Appointment on contract for five years. Pay scale Rs. 1250 per month (£1,125 per annum) rising by annual increments of Rs. 100 per month (£90 per annum) to Rs. 1750 per month (£1,575 per annum) plus in the case of a candidate of non-Asiatic domicile £25 per month Overseas pay. Initial pay may be higher than minimum of scale for candidate with exceptional qualifications. Cost of living allowance. Free passage to and from India for selected candidate and if married for his wife. Leave. Provident Fund.

Further particulars and forms of application may be obtained on request by postcard from the High Commissioner for India, General Department, India House, Aldwych, London, W.C.2. Completed applications must be submitted not later than 22 June 1946.

LONDON COUNTY COUNCIL

Required at Hammersmith School of Building and Arts and Crafts, Lime Grove, Shepherd's Bush, W.12, to commence as soon as possible, full-time teachers of (*a*) Brickwork, (*b*) Carpentry and Joinery, with ability to assist with associated subjects, for work mainly in Secondary (Technical) School. Applicants should possess full Technological Certificate of the City and Guilds of London Institute. Good industrial experience essential. (*c*) Architectural drawing and design, including history of architecture ; (*d*) Builders' quantities and associated subjects. Preference given to members of R.I.B.A. or Chartered Surveyor's Institution.

Burnham scale salary £300 × £15 × £525 (men), plus London allowance (minimum £36) a year and additions for training and qualifications as applicable. Commencing salary according to teaching and industrial experience. Application forms from Education Officer (T.1), County Hall, S.E.1 (stamped addressed foolscap envelope necessary), returnable by 15 June 1946. Members of H.M. Forces serving abroad should apply by letter.

A.S.B. Lecture at the R.I.B.A.

Wednesday, 5 June 1946, at 5.45 p.m.

"SOCIOLOGY AND ARCHITECTURE,"

By A.S.B. STUDY GROUP NO. 1.

Presented by M. Hartland Thomas [F.]

General

Sociological studies and architecture.

Evolution

1. Social trends.
2. Flexibility in building and planning.
3. Time-lag in public taste.
4. "Existence minimum" standards.

Community Problems

1. Transport and density.
2. "Neighbourhood unit."

Practical

Some administrative problems.

Copies of the lectures may be obtained two weeks before they are due to be delivered on application to the Editor R.I.B.A. JOURNAL. A register is kept at the R.I.B.A. of those who ask for copies of lectures or who express themselves interested in any particular lecture.

U.S. Service Refresher Courses

The following letter has been received by the Secretary :—

6876TH REGIONAL STAFF DETACHMENT UNITED STATES FORCES EUROPEAN THEATRE INFORMATION AND EDUCATION DIVISION T.W.C.A. SECTION, U.K. REGION.

March 1946.

C. D. Spragg, Esq., Secretary R.I.B.A.

Dear Mr. Spragg,

We wish to confirm information which you have already received verbally, to the effect that it will be necessary to discontinue the Army Education Programme conducted by Training Within Civilian Agencies at the close of the current term, or not later than 30 April 1946, due to existing military commitments of our forces in the Army of Occupation.

We regret the termination of this very pleasant and worth-while association with you. The benefits and influence of this association will continue to be of inestimable value to all of us in the years ahead.

Please accept our thanks for your splendid co-operation and assistance. Your efforts have been greatly appreciated by this headquarters, as well as by the thousands of American soldiers who have participated in this programme.

Sincerely yours,

H. A. VEAZEY,

Lieut.-Col., Inf.,

Chief, T.W.C.A., U.K. Region.

German War-Time Advances in Structural Engineering

The attention of members is drawn to the lecture on the advances in the science of structural engineering which have been made by the Germans during the war, to be delivered by Mr. John Mason, M.Inst. Struct.E., at a meeting of the Institution of Structural Engineers to be held on Thursday, 27 June, at 6 p.m., at 11 Upper Belgrave Street, S.W.1. The Council of the Institution of Structural Engineers have invited members of the R.I.B.A. to attend the meeting. Cards of invitation are not required.

Mr. J. Mason was a member of the Ministry of Works Assessors' team in Germany, of which Mr. M. Hartland Thomas [*F.*] was leader. It is expected that Mr. Hartland Thomas will lecture later in the year on the findings of the team as a whole.

R.I.B.A. Final Examination

DISTINCTION IN THESIS

The following Students have been awarded a mark of Distinction for their Final Examination Theses :—

Kerr, Frederick H.

Atkinson, George A.

Correction

The article in the January JOURNAL, *The Structure of Salisbury Cathedral Tower and Spire* by Mr. W. A. Forsyth, had the letters "F.S.A." after Mr. Forsyth's name in the heading. Mr. Forsyth, who did not see this heading in proof, is not a Fellow of the Society of Antiquaries ; the mistake was made in the JOURNAL office.

R.I.B.A. Maintenance Scholarships in Architecture

The R.I.B.A. offer for award in July 1946 the following Maintenance Scholarships in Architecture tenable from 1 Oct. 1946 :—

A. An R.I.B.A. 4th and 5th year Maintenance Scholarship of £60 to enable students who have passed the Intermediate stage to complete an approved course at a School of Architecture recognised for exemption from the R.I.B.A. Final Examination.

B. Two R.I.B.A. Houston Maintenance Scholarships of a maximum value of £125 per annum each. They are available for any stage of training at a Recognised School of Architecture and are awarded in the first instance for one year. They are renewable from year to year.

(The Houston Maintenance Scholarships are for the purpose of providing educational and Maintenance allowances for the sons of architects and artists who may be, or at the time of their death were, in impecunious circumstances, whether such architects or artists are alive or dead.)

C. The Artists' General Benevolent Institution Maintenance Scholarship of a maximum of £125 per annum is available in the first instance for one year and renewable for two further periods of one year each.

(The Artists' General Benevolent Institution Maintenance Scholarship is open only to orphans or sons or daughters of an architect or artist.)

D. The "Builder" Maintenance Scholarship. This Scholarship is of the value of £60 per annum and is tenable as an ordinary Maintenance Scholarship or as a 4th and 5th year Maintenance Scholarship.

E. The Howe Green 4th and 5th year Maintenance Scholarship of £40 to enable students who have passed the Intermediate stage to complete an approved course at a School of Architecture recognised for exemption from the R.I.B.A. Final Examination.

The scholarships, except where otherwise stated, will be tenable in the first instance for one year and renewable for two further periods of one year each. They are intended to enable promising students, whose parents or guardians have not the necessary means, to attend approved courses at the schools of architecture recognised for exemption from the R.I.B.A. examinations. Students already taking such a course are also eligible to apply for a scholarship. The scholarships are available for students residing in Great Britain.

The value of the scholarships, up to the limits stated, will depend on the financial circumstances of the parents or guardians of the candidate. The parents or guardians will be required to furnish particulars, on the proper form, of their financial position.

Particulars and forms of application may be obtained free on application to the Secretary to the Board of Architectural Education, R.I.B.A., 66 Portland Place, W.1. The closing date for the receipt of applications, duly completed, is 1 June 1946.

Competitions

COMPETITION FOR PLANNING OF THE HAYLING BEACHLANDS

The Urban District Council of Havant and Waterloo invite the submission of designs from competitors with suitable professional qualifications for the laying out of part of an area known as the Hayling Beachlands with a view to the improvement of its amenities.

Assessor : Dr. H. V. Lanchester, Litt.D., M.T.P.I. [*F.*].

Premiums : £200, £100, £50.

Last day for submitting designs : 30 September 1946.

Last day for questions : 31 May 1946.

Conditions of the competition may be obtained on application to Albert E. Madgwick, Esq., Clerk of the Council, Town Hall, Havant. Deposit, one guinea.

Competition Result

COMPETITION FOR LAYOUT AND REPLANNING OF THE CRYSTAL PALACE

1. Messrs. Herbert Jackson [*F.*] and Reginald Edmonds [*F.*].
2. Messrs. Eric Lyons [*L.*] and Roy Christy [*A.*]
3. Messrs. Allan Johnson [*F.*] and Messrs. Lanchester and Lodge [*F*/*F.*].

Further premiums of £250 each awarded to:—

George L. Greaves [*A.*] and J. W. Jepson (Messrs. Edward Forshaw & Greaves).

A. D. Connell, George Simonek and Lyndon C. Cooper.

Hon. Mention :—Major A. G. Evans, R.E., and Italian Architects.

Correspondence

R.I.B.A. Staff Changes

To the Editor, JOURNAL R.I.B.A.

SIR,—I have just read in the JOURNAL the news of two events which will cause deep regret in all who know and care for the fortunes of the R.I.B.A. The first is the retirement of Mr. Carter, who gives up the Librarianship after 16 years of service the value of which can never be too highly estimated. The Library has always been the most important architectural library in the world. Mr. Carter has made it also the best and no praise can be too great for the skill, enthusiasm and devotion which he has brought to the task. The completion of the great Catalogue is only one of the many improvements brought about under his guidance. All who use the Library will greatly miss his personality and the R.I.B.A. will be fortunate indeed if it can obtain a successor of his quality.

The second is the impending retirement of Mr. F. G. Baker, the Chief Clerk, after more than 40 years in the office. He has literally worn himself out in the service of the R.I.B.A. and its members and the good wishes of all of us will accompany him in his well-earned retirement. Absolute devotion and unfailing courtesy and patience have marked his work from first to last and it is difficult to think of the R.I.B.A. without him.

Yours truly,

IAN MACALISTER.

Restoration of Historic Buildings

To the Editor, JOURNAL R.I.B.A.

SIR,—It may have occurred to some teaching members of our profession that a wide opportunity will soon offer itself to many British students of architecture with the reconstruction of the "blitzed" cities of both the continent and this country, when the time comes for this important work to be undertaken. At present, the schools seem to be concentrating their efforts mainly in the study of town planning and construction, but I venture to suggest that these are only two of the branches of the art of architecture, although very important.

Would it not be advisable to encourage equally the artistic and scholarly qualities which will be demanded from those who will, soon, we hope, be entrusted with the rebuilding of the ruined cities and historic buildings all over the continent of Europe?

In my opinion, traditional architecture should be taught as thoroughly as planning and construction in order to give the student, at the end of his training, a solid foundation on which to work, whether he decides for "Tradition" or "Modernism" or both.

Unfortunately, to-day many young architects, if given a Classic, Renaissance or Mediæval building to restore, have not the knowledge to do it properly; the rebuilding of the ruined cities which at present only receive protection against the effects of the weather will no doubt be undertaken permanently sooner or later and it will be then that the services of the younger generation of competent British architects will be in great demand for at least the next two generations.

One frequently reads in letters from foreign colleagues of the esteem with which everybody and everything British is at present held and our reputation is evidently very high in the councils of the world. We have gained the confidence and admiration of everyone for our deeds and opinions in the struggle from which we are now slowly emerging. We need fear no competition either from archæologists, engineers or other experts with whom we should work in harmony in a field which we architects are alone competent to explore.

After the war of 1914-18 the Americans rebuilt the devastated cities of Louvain and Dinant in Belgium and this work was controlled by American architects and financed by American capital. This should be our aim when we are asked to undertake a similar task and we can perform it with confidence providing always that our young architects are adequately equipped for this responsible work.

The intelligent restoration of historic buildings can *only* be safely entrusted to those who are genuinely in sympathy with the great architecture of the past and their task will be difficult, responsible and exacting. This work is eminently suitable to young, enthusiastic and energetic men and women. They will have to master foreign languages and probably live abroad under unfamiliar conditions for a con-

siderable time. They will also find it necessary and desirable to collaborate with foreign colleagues and conform to the local conditions of the district in which they will work.

All this can be done, as it was during the reconstruction period after the 1914 Armistice when not only monuments, memorials and cemeteries were designed and built all over France and Belgium, but a considerable amount of commercial work was undertaken and supervised by our older colleagues whose contribution was welcomed by French and Belgium clients.

These proposals, if adopted, need in no way compete with the aims of the town planners, city engineers, valuers and surveyors who sometimes consider that the architects' contribution is a somewhat redundant and costly accompaniment to their own schemes and that the addition of beauty is an extra burden on the already excessive cost of building.

I have mentioned these matters to several of my architect friends and they seem to think that these views should be put forward and have advised me to write to you in the hope that the R.I.B.A. JOURNAL may consider them of some interest to its readers.

Yours truly,

ARTHUR J. DAVIS [*F.*].

Charles Rennie Mackintosh

To the Editor, JOURNAL R.I.B.A.

SIR—For a number of years I have made a special study of the life and work of the late Charles Rennie Mackintosh (1868-1928), the Glasgow architect, and although my record is now practically complete, I am anxious to tap every possible source of information.

May I appeal through your columns to readers of the JOURNAL for any help they may be able to give, especially regarding the following points :—

(1) Information about his work on the Continent *c.* 1900.
(2) Correspondence, diaries or other writings.
(3) Information about drawings, sketches, watercolours, furniture, etc., in the hands of private individuals.
(4) Lectures or talks by Mackintosh—particulars and dates if possible.

Apparently trivial incidents frequently open up new channels of enquiry, and I would ask anyone who knew Mackintosh and has not already communicated with me to do so at the above address or at the School of Art, 167 Renfrew Street, Glasgow.

Yours faithfully,

THOMAS HOWARTH [*A.*]

Obituaries

Professor Stanley Davenport Adshead [*F.*], P.P.T.P.I., M.A., Hon. M.Arch., Liverpool

We regret to record the death of Professor S. D. Adshead [*F.*] on 11 April 1946, in his seventy-seventh year. Mr. Stanley C. Ramsey [*F.*] has sent us the following appreciation :—

" Whilst grateful to the Editor for this opportunity of proffering, however inadequately, a slight tribute to my old friend and partner, Stanley Adshead, I realise how difficult it is for me who have known him so long and so intimately, to take a sufficiently detached view to attempt anything more than a purely personal appreciation. He was for over forty years my most intimate friend ; a friendship which, I am happy to think, survived unimpaired the shocks and changes which time inevitably brings. For some twenty years we were, in the fullest sense of the term partners, and it says much for the relations existing between us that when our varying interests forced us into diverse paths, we found it still possible to continue to share offices—even to the extent of collaborating over more than one job—an arrangement which only terminated two years ago.

For me Adshead's most distinguishing trait was a sense of greatness, a greatness of heart as well as of mind, and which I found in him to a greater extent than in any other man.

In spite of his superb gifts, and he had many, there was an indefinable something which transcended all his work, something different from talent, something apart from genius, which I can only define by the word 'greatness.' He appeared to view all life and all creative effort as from a mountain top, and if at times he was careless of, or indifferent to the minutiæ of every-day existence, this is only to say that he had, as everyone has, the defects of his virtues.

Not only was he a most exciting and inspiring person to work with, but a most lovable one. If in my jealous regard I feel he missed some of the rewards and honours to which, in my opinion, he was entitled, in the high place which I am sure the ultimate judgment of men will accord him, such abstractions and deductions will be of very little account."

" Lofty designs must close in like effects :
Loftily lying,
Leave him—still loftier than the world suspects,
Living and dying."

BIOGRAPHICAL NOTE

Stanley Davenport Adshead, M.A., M.Arch [*F.*] was born in 1868. He was trained in the offices of Manchester architects and became Professor of Town Planning in Liverpool University in 1909, which appointment he held until 1914. Practising in Bedford Row and later at 46 Great Russell Street, in 1911, he entered into partnership with Mr. Stanley C. Ramsey [*F.*] and practised with Mr. Ramsey at 32 Wigmore Street, W.1, from 1911-1931.

A Vice-President of the Royal Institute of British Architects, Professor Adshead occupied the chair of Professor of Town Planning, London University, from 1914 to 1935, being Emeritus Professor since 1935. He was a Past President of the Town Planning Institute.

His principal buildings were : Ramsgate Pavilion ; Carnegie Library, Ramsgate ; Repertory Theatre, Liverpool ; Worthing Pavilion and Band enclosure ; the rebuilding of the Duchy of Cornwall Estate, Kennington ; numerous old people's dwellings and municipal flats at Stepney and East London ; and, in collaboration with Sir Patrick Abercrombie [*F.*], important housing schemes at Dormanstown, Middlesbrough.

His many literary works on town planning included " Town Planning and Town Development " (1923), " A New England " (1942), and Regional Planning Schemes, Chesterfield, South Essex, West Essex, 1923-33.

Professor Adshead's daughter, Mrs. Stephen Bone, says that one of the outstanding characteristics of her father's career was that he always did all his own perspectives, illustrated his own reports, drew or superintended his plans himself, continued to paint landscapes in watercolour to the end of his life and was interested in all painting.

Mr. Basil Martin Sullivan [*F.*], C.I.E., O.B.E., A.M.P.T.I.

An Appreciation by DR. H. V. LANCHESTER [*F.*]

" The loss of Mr. Basil M. Sullivan at a comparatively early age will be keenly felt by his numerous friends, and indeed by all who had been in touch with him at the R.I.B.A. and elsewhere. Mr. Sullivan was the second son of Mr. Michael Sullivan, R.C.A., the head of Hastings School of Art, and received his education at the Grammar School there and in the architectural department of the School of Art. He entered the office of Mr. Collcutt when the Savoy Hotel was being built, subsequently that of Mr. Florence, then, after carrying out a large country house in conjunction with his brother Sylvester, went to Messrs. Seth Smith & Munro, and about 1910 joined Messrs. Lanchester & Rickards as senior assistant. In 1913 he became an Associate R.I.B.A., and towards the end of that year was appointed consulting architect to the P. W. Department of the Punjab, taking up his duties at Lahore. In this capacity he carried out a number of important buildings and was later appointed architect for the British Ministry at Kabul, Afghanistan, an attractive group of buildings and gardens, perhaps the outstanding point in his career in the East.

Shortly after his return home in 1938 he joined Sylvester in his London practice and speedily took a keen interest in the various activities of the R.I.B.A., of which he had become a Fellow in 1921.

His administrative experience proved of the greatest value and before long he found himself on a large number of committees. As chairman of the Board of Architectural Education he became a member of the Council (and its Executive Committee) in April 1944 ; he was also one of the moderators and on the Visiting Board and a member of the Architectural Education Council of the U.K. He was hon. secretary to the M.O.W. Committee on the architectural use of building material ; on the Building Research Committee ; the Town and Country Planning and the *ad hoc* Committee on Landscape Architecture and numerous others. He was also R.I.B.A. representative on the Building Industries National Council.

Last year failing health dictated his resignation from many of these positions, but not until some two months ago was he compelled to give up all activities. Apart from his marked ability in various directions, his charm of character, his sympathetic attitude towards all with whom he came in contact and his unfailing tact in handling difficult situations makes his loss an irreplaceable one, both to the profession in general and to his large circle of personal friends."

Membership Lists

ELECTION: 9 APRIL 1946

The following candidates for membership were elected on 9 April 1946 :—

AS FELLOWS (3)

ARTHUR : PROF. ERIC ROSS, M.A., B.Arch. [*A.* 1924], Toronto.
BAILLON : LOUIS BRABAZON [*A.* 1937], Northampton.
MILLS : EDWARD DAVID WILLIAM [*A.* 1937].

AS ASSOCIATES (7)

BOLOT : AARON, Kingsford, N.S.W., Australia.
COWELL : EDWARD WILLIAM (Major), Kettering.
CURRAN : MICHAEL JOHN, Kilkenny, Eire.
GOOD : ARTHUR BERNARD VAUGHAN.
MCKENZIE : GORDON ALEXANDER, Kingsford, N.S.W., Australia.
MCKENZIE : MALCOLM HARRINGTON, B.Arch., Auckland, New Zealand.
MATTHEWS : ALBERT EDWARD (Capt. R.E.).

AS LICENTIATES (19)

BEAUMONT : EDMUND ALFRED.
EGLINTON : RONALD WOLLSTEIN.
FRANKISH : ALFRED.
HALLAM : WILLIAM HERBERT.
HOLMES : ERIC.
HOOPER : WILLIAM THOMAS.
HUGHES : GODFREY WILLIAM, M.B.E. (Major R.E.).
JOHNSON : CHRISTOPHER, Richmond, Yorks.
KINGHAM : HENRY (Major), Kirkcaldy.
KINLOCH : WILLIAM, Elgin.
KIRSOP-WEBB : JOHN.
LEDBURY : BERT, Manchester.
MANSON : JOHN WELLWOOD, Glasgow.
MARCHANT : GEORGE WILLIAM, Bristol.
MOORE : FRANK EDWARD, Liverpool.
PAYNE : HENRY GEORGE (Capt. R.E.).
PETCH, CECIL ERNEST (Capt. R.E.), Brighton.
WHITE : RICHARD CLAVELL LUKE, Leicester.
WILLIAMSON : HENRY ROCHEAD, Edinburgh.

ELECTION: 25 JUNE 1946

An election of candidates for membership will take place on 25 June 1946. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Tuesday, 11 June 1946.

The names following the applicant's address are those of his proposers.

AS HON. ASSOCIATE (1)

APPLETON : SIR EDWARD VICTOR, G.B.E., K.C.B., D.Sc., LL.D., F.R.S., 39 Westleigh Avenue, S.W.15. Proposed by the Council.

AS FELLOWS (12)

CRICKMAY : COLIN ROSSER [*A.* 1928], 23 St. Thomas Street, Weymouth ; Threeways, Rodwell Road, Weymouth. S. R. Pierce, C. H. James and R. E. Enthoven.

CRICKMAY : HUGH WAYDELIN [*A.* 1931], 23 St. Thomas Street, Weymouth ; 50 St. Mary Street, Weymouth. Sydney Tatchell, Prof. A. E. Richardson and Prof. H. O. Corfiato.

PAGE : TERENCE CULMER, A.A.Dip. [*A.* 1935], Messrs. Stock, Page & Stock, 18 St. Thomas's Street, S.E.1 ; Leaf House, Salmons Lane West, Caterham, Surrey. Lieut.-Colonel B. C. Page, N. D. Sheffield and H. J. Higgs.

And the following Licentiates who have passed the qualifying examination :—

ALLEN : FREDERICK HOWARD, 1 St. Andrew Street, Plymouth, Devon ; 8 Brownston Street, Modbury, S. Devon. Thomas Overbury, H. S. Davis and C. W. Yates.

DICK : DOUGLAS LOUIS, Flat 3, 21 Collingham Gardens, S.W.5. Michael Waterhouse, Howard Lobb and A. S. R. Ley.

FIELD : SIDNEY JOHN, 4 Station Approach, Snaresbrook, E.11 ; 10 Park Road, Wanstead, E.12. A. H. Gale, D. T. Wallis and Thos. Wallis.

MACGREGOR : JOHN WISHERT, Messrs. Wallis, Gilbert & Partners, 5 Cromwell Road, S.W.7 ; 23 Scotts Lane, Shortlands, Kent ; Thomas Wallis, D. T. Wallis and W. F. Granger.

MACKEITH : CHARLES HEWITSON, 97 Church Street, Blackpool ; 199 Newton Drive, Blackpool. Prof. Sir Charles Reilly, H. T. Jackson and F. L. Lumb.

MELLOR : RICHARD FRANCIS MOUNTFORD, Buildings Department, Springfield, Maidstone, Kent ; Coedlanne, Merthyr Mawr, Bridgend, Glam., c/o 85 Tonbridge Road, Maidstone. S. H. Loweth, E. B. Musman and R. D. Jones.

O'NEILL : GEORGE GORDON, 65 Springfield Road, Chelmsford, Essex. Sir Giles Gilbert Scott, A. E. Wiseman and G. A. Henry.

ROBSON : GEORGE, A.M.T.P.I., Ministry of Town and Country Planning, 60 Silver Lonnen, Denton, Newcastle-upon-Tyne. F. B. Nightingale, H. E. Jarvis and Edmund Oakley.

WRIGHT : ARTHUR GEORGE BEAUMONT, Ushers Wiltshire Brewery, Ltd., Trowbridge, Wilts ; Oriel House, Hilperton, Trowbridge. T. W. Snailum, G. D. G. Hake and E. H. Button.

AS ASSOCIATES (16)

The name of a school or schools after a candidate's name indicates the passing of a recognised course.

ARMSTRONG : DONALD FORBES [Special Final], 8 Bedford Road, Letchworth, Herts. John Watson, W. J. Smith and L. H. Ross.

BATLEY : WILFRID PETERJOHN [Special Final], 40 York Street, Baker Street, W.1. H. R. Bird, W. B. Simpson and L. R. Guthrie.

BULMER : ARTHUR HERBERT [Special Final], 6 Kelvin Court, Spencer Road, Chiswick, W.4. A. C. Townsend, G. C. Wilson and P. M. Andrews.

COOPER : RAYMOND [Final], 15 Hale Road, Altrincham, Cheshire. J. E. Kewell, J. P. Nunn and E. A. Newton.

FARROW : WILLIAM RICHARD JOSEPH [Special Final], 108 Alma Road, Bournemouth, Hants. A. H. Jones, T. E. North and W. R. H. Gardner.

HATTON : JOHN STANISLAUS [Final], 23 St. Anthony's Road, Deepdale, Preston, Lancs. Proposed by the President and Hon. Sec. of the Manchester Soc. of Arch. and applying for nomination by the Council under Bye-law 3 (*d*).

JONES : FREDERICK WILLIAM [Special Final], 5 Northwood Way, Northwood, Middlesex. S. R. Miller and applying for nomination by the Council under Bye-law 3 (*d*).

KERR : FREDERICK HENRI [Final], 21 Oaklands, Argyle Road, Ealing, W.13. T. E. Scott, L. S. Stanley and A. W. Harwood.

MCDOWALL : MISS BESSIE [Final], 36 Rae Street, Dumfries. W. J. Smith, A. N. Malcolm and A. G. Henderson.

MAHER : MISS MAUREEN HILARY [Polytechnic, Regent Street, London], 25 Sion Court, Richmond Road, Twickenham, Middlesex. J. K. Hicks, E. C. Scherrer and Anthony Minoprio.

MITCHELL : ARCHIBALD DALE [Special Final], 137 Stanstead Road, Hoddesdon, Herts. C. H. Aslin, A. L. Roberts and J. F. Howes.

SAWDAY : JOHN TREVOR [Final], Evington House, Old Evington, Leicester. Albert Herbert, Sir Giles Gilbert Scott and C. J. Mole.

SHELTON : JOSEPH THORNEYCROFT [Special Final], Flamstead, High Cross, Rogustone, Newport, Mon. C. F. Bates, F. R. S. Yorke and C. L. Jones.

STODDARD : GILBERT [Final], 59 Northway, Golders Green, N.W.11. E. V. Harris, G. MacKenzie Trench and C. J. Mole.

UNSWORTH : HERBERT [Final], 52 Kenilworth Drive, Croxley Green, Herts. Applying for nomination by the Council under Bye-law 3 (*d*).

WYLDE : JOHN HASLAM [Special Final], 69 High Street, Cowes, I.O.W. Clifford Holliday, R. E. Enthoven and A. F. C. Bentley.

AS LICENTIATES (18)

COLE : HERBERT CRAMER, Ministry of Works, Abell House, John Islip Street, S.W.1 ; 1 Werter Road, Putney, S.W.15. Z. Sirotkin, A. G. Alexander, and C. G. Mant.

GRANTHAM : GEORGE JAMES (Capt.), Dept. of Building, Central Technical College, Birmingham, 1 ; 97 Sherwood Road, Hall Green, Birmingham, 28. J. B. Surman and the President and Hon. Sec. of the Birmingham and Five Counties Arch. Assocn. under Bye-law 3 (*a*).

HARRINGTON : DOUGLAS WILLIAM, 32 Craven Street, Strand, W.C.2 ; 61 Wavertree Court, Streatham Hill, S.W.2. S. Tatchell, A. E. Gurney and A. E. Bullock.

HATTERSLEY : ROY WILLIAM, 87 Buxton Street, Sneyd Green, Hanley, Stoke-on-Trent ; Municipal Offices, Sutton, Surrey. S. P. Taylor, J. H. Markham, and P. C. Boddy.

HOPKINS : RONALD AUSTIN, 33 Hartland Road, Kilburn, N.W.6. B. L. Sutcliffe, E. R. Taylor, and applying for nomination by the Council under Bye-law 3 (*d*).

HUTCHON : JAMES, 8 Russel Place, Kirkcaldy, Fife, Scotland. William Williamson and the President and Secretary of the Dundee Inst. of Arch. under Bye-law 3 (*a*).

JONES : JOHN LESLIE, c/o Messrs. L. W. Barnard & Partners, 13 Imperial Square, Cheltenham ; 96 Brooklyn Road, Cheltenham, Glos. L. W. Barnard and the President and Hon. Sec. of the Gloucestershire Arch. Assocn. under Bye-law 3 (*a*).

JONES : JOSEPH GLYNNE, County Architect's Department, County Offices, Caernarvon ; "Iona," Bethel Road, Caernarvon, N. Wales. R. D. Jones, B. P. Davies and John Hughes.

KIEFT : FREDERICK GEORGE HENRY, War Damage Commission ; "The Cottage," 83 Lyall Mews West, Eaton Square, S.W.1. G. W. Smith, Basil Oliver and Stanley Blount.

KNEALE : ANDREW WILSON, 2 Abingdon Road, Davenport, Stockport, Cheshire. Robert Cromie, J. S. Beaumont and J. P. Nunn.

KNIGHT : HENRY RONALD EWART, Architect's Department, L.C.C., County Hall, S.E.1 ; 41 Lexham Gardens, Kensington, W.8. J. W. Hepburn, R. Wilson and C. Kennard.

MACLEOD : JAMES HASTIE, 87 W. Regent Street, Glasgow ; 14 Glenburn Road, Bearsden, Dumbartonshire. G. Gardner McLean, J. R. McKay and G. D. MacNiven.

NICOLSON : MALCOLM, Royal Engineer's Office, Shorncliffe, Folkestone ; 135 Pleydell Gardens, Folkestone. Lieut.-Col. A. E. Henson, H. J. Stribling and E. A. Remnant.

PRINCE : EDWIN FRANCIS EWART, 64 Rodney Street, Liverpool, 1 ; 45 Montrose Drive, Southport. Richard Holt, O. D. Black and Gilbert Fraser.

SMITH : FRANCIS GILBERT, "Aviemore," Nant Hall Road, Prestatyn, Flints. G. A. Humphreys, F. A. Roberts and S. C. Foulkes.

STAZIKER : FRED, Borough Surveyor's Office, Town Hall, Nelson, Lancs. ; 466 Audley Range, Blackburn, Lancs. Walter Stirrup, W. H. Harrison and Samuel Taylor.

SUCH : CYRIL JAMES, Borough Engineer's Department, Cheltenham ; 160 Brooklyn Road, Cheltenham, Glos. H. T. Rainger, and the President and Hon. Sec. of the Gloucestershire Arch. Assoc., under Bye-Law 3 (*a*).

TOSH : GEORGE SAMSON, County Buildings, Dumfries ; "Strathgarry," Corberry Avenue, Dumfries. J. M. Bowie, A. G. Henderson and A. N. Malcolm.

ELECTION: OCTOBER 1946

An election of candidates for membership will take place in October 1946. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday, 20 July 1946.

The names following the applicant's address are those of his proposers.

AS ASSOCIATES (6)

The name of a school or schools after a candidate's name indicates the passing of a recognised course.

BHALLA : JAI RATTAN [Final], c/o Messrs. Staffad & Co., 9 Forjett Hill, Bombay, 26. Frederick McKnight, C. M. Master, S. S. Reuben.

JENKINS : JOHN TAMPLIN [Passed a qualifying exam. approved by the I.S.A.A.], Kenilworth Court, Kenilworth, Cape. Robert Howden, A. S. Furner, and applying for nomination by the Council under Bye-law 3 (*d*).

MEHTA : NOSHIR NAOROJI [Final], The Shelter, 119 First Road, Khar, Bombay, India. C. M. Master, S. S. Reuben, B. E. E. Doctor.

SAMARASEKERA : AGAMPODI JUSTIN VICTOR DE ZOYSA [Final], c/o Messrs. Sir T. P. Bennett & Son, 43 Bloomsbury Square, London, W.C.1. Sir T. P. Bennett, C. W. Box, M. L. Winslade.

SPOONER : PETER [Passed a qualifying exam. approved by the R.A.I.A.], 60 Dunlop Street, Epping, Sydney, N.S.W., Australia. Prof. Leslie Wilkinson, A. S. Hook, B. J. Waterhouse.

TACON : IVOR CHARLES RUSSELL [Passed a qualifying exam. approved by the R.A.I.A.], 28 Richardson Street, Fairfield, N.S.W. Prof. Leslie Wilkinson, and applying for nomination by the Council under Bye-law 3 (*d*).

MEMBERS' COLUMN

APPOINTMENTS

MR. CHARLES HILTON [*A.*] has been appointed Senior Town Planning Assistant in the Borough Engineer's Office, Mitcham, Surrey, and takes up his duties on 1 May 1946.

MR. ERIC A. W. IXER [*A.*] was some six months ago appointed Architect to the Education Committee of the County Borough of Northampton and will be pleased to receive trade catalogues, etc., at 46 Haselwood Road, Northampton.

MR. W. W. THOMAS [*A.*] has been appointed Schools' Architect to the Education Committee of the County Borough of Doncaster, Wood Street, Doncaster, where he will be pleased to receive trade catalogues, etc.

PRACTICES AND PARTNERSHIPS

MR. J. H. ALLEYN [*A.*] and MR. JOHN W. M. MANSEL [*A.*], after release from war service, have resumed their practice and will be pleased to receive trade catalogues, etc., at their new address, Staple Inn Buildings, High Holborn, London, W.C.1 (Holborn 5311).

MR. G. W. BAKER [*L.*], having been appointed architect to the Doncaster Co-operative Society, Ltd., will be glad to receive trade catalogues and data relating in particular to shop premises and stores, garages, dairies, bakers, offices and housing, addressed to him at the Doncaster Co-operative Society's Head Office, 1 John Street, Doncaster.

MR. E. BARBER [*L.*] has resumed practice under the name of Foster & Barber in temporary offices at 8 High Street, Ramsgate, Kent.

MR. L. A. CHACKETT [*F.*], has resigned from his position as an Assistant Director of Mobile Labour Services in the Ministry of Works and will be resuming his partnership with Mr. L. A. Culliford [*F.*] in the firm of L. A. Culliford & Partners, 47 Essex Street, Strand, W.C.2, from 7 May 1946.

MR. RONALD P. DEMUTH, M.A. [*L.*], has entered into partnership with Mr. Raymond Pidgeon [*L.*] and they will practice under the style of Pidgeon & Demuth at 37 Great James Street, Bedford Row, London, W.C.1 (Holborn 9060).

MR. H. EDMUND DOE [*A.*], having obtained his release from the Air Ministry, has been taken into partnership by Mr. E. B. Parkinson [*L.*], and they will practise as Parkinson & Doe at Montague House, Huntingdon.

MR. GEORGE L. GREAVES [*A.*], of Hanley, Stoke-on-Trent, and Mr. Edward F. Massey [*A.*], of 17 Museum Street, Warrington, Lancs., have amalgamated their practices and are now in partnership at their old addresses and also at 186 Oxford Road, Manchester.

MR. G. I. C. HIGHET [*A.*] has commenced practice at 10 Bayley Street, Bedford Square, London, W.C.1 (Museum 4211).

MESSRS. JAMES & BYWATERS and ROWLAND PIERCE [F/F.R.I.B.A.] announce that they have taken into partnership Mr. W. W. Atkinson [*A.*]. The name of the firm will remain unchanged and the practice will continue from 5 Bloomsbury Street, W.C.1 (Museum 9952).

MR. ANTONY LAMB [*A.*] has commenced practice at the Town Hall, Ottery St. Mary, Devonshire, where he has also been appointed architect to the Urban District Council and will be pleased to receive trade catalogues, etc.

MESSRS. LANCHESTER & LODGE [*F./F.R.I.B.A.*], 11 Woburn Place, London, W.C.1, have taken into the firm as partners the four senior members of their staff, namely, Mr. A. Johnson [*F.*], Mr. N. S. Morris [*A.*], Mr. O'B. J. L. Rowe and Mr. A. Writer [*A.*].

MR. OLIVER LAW [*F.*] has recommenced private practice at 19 Queen Anne's Gate, Westminster, S.W.1 (Whitehall 2552). The practice will be carried on under the title of Oliver Law & Partners.

MR. CECIL MASEY [*F.*] resumes practice at 15 Adeline Place, Bedford Square, London, W.C.1 (Museum 9565).

MR. HUGH D. ROBERTS [*F.*] and MR. RICHARD H. DAVIES [*A.*] have entered into partnership as from 1 April 1946. The firm will be known as Hugh Roberts & Davies and are practising at 13 Suffolk Street, Haymarket, London, S.W.1 (Whitehall 2881) and 7 Brock Street, The Circus, Bath (Bath 4112).

MR. VYVYAN SALISBURY [*F.*] has resumed practice at 88 Molesworth Street, Wadebridge, under the name of Drew & Salisbury.

MR. SEPTIMUS WARWICK [*F.*] has taken into partnership Mr. Geoffrey W. Banfield [*A.*]. The practice will be known as Septimus Warwick & Partners and will continue at 2, 3 and 4 Cockspur Street, London, S.W.1 (Whitehall 8263).

MR. B. THORP WHITING [*A.*], on release from the Services, has resumed partnership with Mr. Harry Gibberd [*A.*] at Theatre Royal Chambers, New Street, Birmingham, 2.

CHANGES OF ADDRESS

MR. J. T. ADAMS [*A.*] has removed to 19 Fonnereau Road, Ipswich.

MR. N. MONTGOMERY [*A.*] has removed from 3 Warwick Terrace, Leeson Park, Dublin to 3 Hawkins Street, D'Olier Street, Dublin

(Dublin 74133), where he will be pleased to receive trade catalogues, etc.

MR. D. E. MORRISON [*A.*] is now in practice at 37 Holmfield Avenue, Brent Bridge, Hendon, N.W.4 (Hendon 1091)

MR. A. R. SHEPPERDSON [*L.*] has removed from 54 Corder Road, Ipswich to Lloyd's Chambers, Cornhill, Ipswich (Ipswich 3861).

PARTNERSHIPS WANTED AND AVAILABLE

ASSOCIATE (35) (Captain R.E. India), due to be released U.K. June, desires partnership in well-established practice anywhere in United Kingdom. Capital available.—Apply Box 243, c/o The Secretary, R.I.B.A. JOURNAL.

ASSOCIATE (Major R.E.), engaged on building works throughout war, to be demobilised in June, wishes to secure partnership with progressive firm. Funds and good connections.—Apply Box 248, c/o The Secretary, R.I.B.A.

ASSOCIATE (37), single, with pre-war practices in West Riding of Yorks, desires partnership in existing practice of good standing, preferably in Leeds or Sheffield, but not essential. Capital available.—Apply Box 247, c/o The Secretary, R.I.B.A.

PARTNERSHIP offered in a 3-year established London and country practice to an Associate. Applicant must be energetic and good in modern design and construction.—Apply Box 249, c/o The Secretary, R.I.B.A.

WANTED.—Junior Partner to take charge of growing practice. South coast town. Self-contained flat. Some capital required.—Apply Box 242, c/o The Secretary, R.I.B.A.

ASSISTANT

FELLOW, with old-established practice on East Coast, requires assistant with a view to partnership.—Apply Box 245, c/o Secretary, R.I.B.A.

PRACTICES FOR SALE

FOR SALE. Practice of a deceased architect. Apply Trustee Department, Royal Exchange Assurance, Royal Exchange, London, E.C.3.

LONDON ARCHITECT [*F.*], busy pre-war practice, wishing to retire, wishes to contact established firm with view to sale of practice. Large contracts in prospect.—Apply Box 244, c/o The Secretary, R.I.B.A.

SOUTH COAST BLITZED CITY ARCHITECT'S PRACTICE. Excellent office and living accommodation. Principals only in strict confidence.—Apply Box 241, c/o The Secretary, R.I.B.A.

WANTED AND FOR SALE

FOR SALE. Set of drawing instruments (12 pieces, including beam compasses) in very good condition.—Apply Box 252, c/o The Secretary, R.I.B.A.

FOR SALE, by member (in Midlands), 5-inch theodolite. Instrument is on four screws with two vernier reading attachments, lengthening piece to telescope, centre weight on cord, all complete in case. Tripod included in sale.

WANTED. D.E. plan chest, level or theodolite and staff, ranging rods, 100-ft. chain and arrows, prismatic compass, Abney level, clinometer, optical square, box sextant, centrolinead, proportional compasses, copying press and stand, drawing table.—Apply Box 251, c/o The Secretary, R.I.B.A.

ACCOMMODATION

ASSOCIATE requires office accommodation in London area: willing to share with another architect and offer assistance.—Apply Box 250, c/o The Secretary, R.I.B.A.

LARGE FURNISHED PANELLED ROOM in King's Bench Walk, Temple, to let for ordinary office hours up to 5.30 p.m. Required occasionally by owner during day-time for secretarial work.—Apply Box 246, c/o The Secretary, R.I.B.A

MEMBERS RELEASED FROM THE SERVICES, ETC.

The following members have notified the R.I.B.A. that they have been released from the Services and are resuming practice and would like to receive trade catalogues, information sheets and other data, etc. :—

MR. C. GURNEY BURGESS [*L.*] (late Captain R.E.), 13 Cheapside, Luton, Bedfordshire.

MR. OLIVER CAREY [*A.*] (late Intelligence Corps), Architects' Department, County Hall, Hertford, Herts.

MR. A. E. CHAFFIN [*L.*], New Road, Rainham, Essex.

MR. JOSHUA CLAYTON [*F.*] and MR. T. VICTOR DEAS [*A.*], High Row Chambers, Darlington, Co. Durham.

MR. A. M. EDWARDS [*A.*], 75 Rhosddu Road, Wrexham.

MR. RAYMOND EMPSALL [*A.*], c/o Borough Engineer and Surveyor, Newnham House, Horne Lane, Bedford.

MR. C. H. EVERY [*A.*], 14 Palace Court, Finchley Road, London, N.W.1.

MR. R. R. FAIRBAIRN, M.C. [*A.*] (late Lt.-Colonel, R.E.), 42 Kensington Mansions, Trebovir Road, Earl's Court, London, S.W.5.

MR. JOSEPH G. FOGEL [*A.*], 14 Kingsgate Avenue, Finchley, London, N.3 (Finchley 3246).

MR. A. H. GALL [*A.*], "Woodlands," 1 Scarisbrick Street, Southport, Lancs.

MR. G. GNEDITCH, M.B.E. [*A.*], 20 Cavendish Avenue, London, N.W.8.

MR. RONALD E. HANCOX [*L.*], 10 Oxford Road, West Bromwich, Staffs.

MR. A. G. HANSTOCK [*A.*], Messrs. Walter Hanstock & Son, Batley, Yorkshire.

MR. F. HERRON [*L.*] (late Squadron Leader, R.A.F.), 4 Ilsyfield Road, Brunton Park, Newcastle-upon-Tyne 3.

CAPT. L. HOWARTH, R.E. [*A.*], private address 171 Bishopthorpe Road, York, has returned to Ministry of Works.

MR. F. NORMAN JAMES [*A.*], 1 St. George's Gardens, Epsom.

MR. NORMAN W. JOHNSON [*A.*], Pembroke Lodge, 8c Upper Belgrave Road, Clifton, Bristol, 8.

MR. LAURENCE KING [*A.*], 37 Gordon Square, London, W.C.1.

MAJOR T. W. KNIGHT, R.E. [*A.*], Messrs. Wilkins, Arnett & Knight, 21 St. Michael's Street, Oxford (Oxford 2331).

MR. ERIC LEVY [*A.*], 24 Framingham Road, Brooklands, Cheshire.

MR. T. WALLER MARWICK [*A.*] (late Major R.E.), 54 Northumberland Street, Edinburgh, 2 (Edinburgh 34735).

MR. A. E. T. MATTHEWS [*A.*], Ripley House, 10 Streatham Common, South Side, London, S.W.16.

CAPT. S. MEYRICK [*A.*], private address 63 Victoria Street, St. Albans, Herts., has taken up an appointment at the Building Research Station.

MR. ADRIAN V. MONTAGU [*F.*] has resumed practice at Acworth & Montagu, 37 Gordon Square, London, W.C.1 (Euston 4249).

MR. BEST OVEREND [*A.*], 55-57 Latrobe Street, Melbourne, Victoria, Australia.

MR. EDGAR F. PEAT [*A.*] (late Lieut.-Colonel R.E.), c/o Westminster Bank, Ltd., Newport, Isle of Wight.

MR. ROGER K. PULLEN [*F.*] (late Major) has resumed practice with his partner Mr. Kenneth Dalgliesh [*F.*], under the style of Dalgliesh & Pullen, 9 Victoria Street, London, S.W.1 (Abb. 4416).

MR. G. A. ROWE [*A.*], Messrs. Abbey & Hanson, 11 Cloth Hall Street, Huddersfield.

MR. J. R. STAMMERS [*A.*] (late Lieut. R.N.V.R.), 37D St. John's Avenue, Putney, London, S.W.

MR. W. T. SUTHERLAND [*A.*] (late Major R.E.), 47 Great King Street, Edinburgh, 3 (Edinburgh 31055).

MR. R. PAXTON WATSON [*F.*], 57 London Road, Reigate, Surrey, and 7 Gray's Inn Square, W.C.1.

MR. B. G. WHATMOUGH [*L.*], 93 Lingfield Crescent, Eltham, London, S.E.9.

MR. C. WOOSTER [*A.*], 26 Lancaster Gardens, Ealing, London, W.13.

MR. DUNCAN WYLSON [*A.*] (late Lieutenant-Commander, R.N.V.R.), 8 Caroline Place Mews, Bayswater, London, W.2. (Bayswater 2219).

CORRECTIONS

MR. H. H. ELLIS [*A.*] (late Major R.E.), 20 Hurst Avenue, West Worthing, Sussex. Initials corrected from March JOURNAL to "H. H." (not H. W.).

MR. H. T. CADBURY-BROWN [*A.*] requests that a correction be made in the March issue, "Members Released from the Services." His initials are "H. T." and his telephone number MAYfair 1994 (*not* May. 1884).

MR. A. UNDERHILL [*A.*], whose return from the Forces and resumption of practice was recently announced, wishes to notify correspondents that his address is Hartley House, 103 (not 105) South End Road, Hampstead, London, N.W.3 (Hampstead 5926).

"A. B. S."

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